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The Oil Man's Calendar

SEPT.	
8–12	American Chemical Society, Atlantic City.
17–19	National Petroleum Association, Atlantic City.
OCT.	
2– 3	West Virginia Oil & Natural Gas Association, Clarksburg.
6– 9	National Safety Congress, Chicago.
9–11	Texas Mid-Continent Oil & Gas Association, Beaumont.
16–17	American Association of Petroleum Geologists, Pacific Section, Los Angeles.
16–18	American Institute of Mining & Metallurgical Engineers, Petroleum Division, Dallas.
20–22	National Stripper Well Association, Tulsa.
20–22	Independent Petroleum Association of America, Tulsa.
30–31	American Institute of Mining & Metallurgical Engineers, Petroleum Division, Los Angeles.
31	California Natural Gasoline Association, Los Angeles.
NOV.	
2– 7	American Petroleum Institute, Annual Meeting, San Francisco.
DEC.	
3	New Mexico Oil & Gas Association, Artesia.
5	Oklahoma Stripper Well Association, Tulsa.

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The Changing Panorama

Push Tank Car Use For East Relief

Rate Cut Still Leaves Rail Movement Far Most Expensive

Although several thousand tank cars have been pressed into service by oil companies in an effort to help ease the East Coast transportation situation, it is understood that the Petroleum Coordination Office is not at all satisfied with progress made along this line. If increased use of tank cars for moving oil to the Atlantic Coast area does not result from the sharply reduced rail rates on crude oil shipped from East Texas and Louisiana to the East Coast, which took effect August 21, a tank car unit of its own may be established by the petroleum coordinator. It is probable that the district advisory committees on transportation would play a part in such a scheme, helping to seek out tank cars and users for East Coast shipments. The set-up probably would be for them to report to some party selected to head rail transportation efforts, which likely would be A. V. Bourque, now executive secretary of voluntary committee created by Defense Transportation Commissioner Budd.

Increased shipments by rail to the East may result from the new tariff rates, however, too large an increase should not be anticipated. The new rate from East Texas to Marcus Hook and Philadelphia is $1.37 per barrel, while from Singer, Louisiana, to the same two East Coast destinations the new rate is $1.27 a barrel. Although these rates represent a reduction of 65 cents a barrel, the new tariffs are still considerably greater than the recently established pipe-line charges of 67½ cents a barrel in effect from Texas, Louisiana and Arkansas to the Atlantic Coast, the latter being considerably higher than tanker rates. Consequently, despite the reduced rail rates, tank-car shipments of crude oil to eastern refineries are bound to increase refined products costs. Even when crude oil from Texas is carried by pipe line as far as Lima, Ohio, and thence by rail eastward, a practice adopted early in July, the combined pipe line-rail charges are $1.00.

Dramatics . . .

The conclusion reached by Associate Editor Logan of THE OIL WEEKLY staff, in an article appearing in last week's issue, that either the administration is planning further heavy diversions of tankers over those already taken in the two big diversions, or that the talk of a 33 percent cut in Atlantic Seaboard consumption, through rationing, is just a scarecrow set up to make the people "realize the emergency," only suggests one original thought — that of heavy additional diversions.

Logan's conclusions did not indicate that gasoline would be plentiful on the Atlantic Seaboard, but after reviewing what is being done to alleviate the situation, he found that while some rationing appears inevitable, a 33 percent cut would be thoroughly unjustified, unless further diversions are planned.

There seems to be an increasing number of people who feel that the good Secretary of the Interior may be dealing somewhat in the dramatic. A democratic senator, who expressed admiration for Ickes' ability, added that the secretary's sense of the dramatic sometimes got the better of him.

Gasoline Taxes . . .

Tax officials of 30 states joined in protests filed with the Senate finance committee against further federal levies on gasoline. They expressed fear that if the federal tax is increased, consumption would be reduced and finances of many states might be placed in jeopardy because gasoline taxes provide approximately one fourth of total tax revenue of states.

The protests of state officials will, of course, be taken into consideration by the committee studying the pending bill, but their opposition will not be very forceful because for years they have protested federal gasoline taxes, seeking to retain motor fuel as a source of revenue for themselves alone.

Pacific Coast Faces Transport Problem

Interchange of Facilities And New Lines Seen as Possible Solution

Removal of three additional tankers from Pacific Coast trade for movement of aviation gasoline to Russia, superimposed upon an already tight transport situation, will lead to rationing in the Pacific Northwest, Alaska and Hawaii, it is pointed out by industry representatives in Los Angeles.

Before diversion of ships for British service, the Pacific Coast oil industry employed 43 tankers. Of these, 3 were normally employed in intercoastal trade, leaving 40 ships to handle supplies to Alaska and Hawaii. Removal of 11 ships for the British service and 3 for Russia, leaves 26 vessels with which to handle the business formerly served with 40.

Numerous suggestions have been advanced to speed up and make increasingly effective the work of ships remaining in the service. While some relief can be expected from such arrangements, it is considered certain that a shortage is in the offing.

Present estimates indicate that the West Coast now is short 4 or 5 ships, after making all possible adjustments to increase effectiveness.

A number of operating changes have been advanced to combat the shortage. These embrace interchange of stocks, transfer of load to pipe lines where possible, and cutting down tanker mileage by shipping from San Francisco to the Pacific Northwest instead of from Los Angeles. Refining capacity at San Francisco, however, is limited. Greatest opportunity for tanker saving lies in elimination of unnecessary calls and more efficient dispatching, which entails the interchange of supplies. As an example, instead of each of seven companies unloading at Astoria, Oregon, one tanker could serve that point for all. This is being considered.

Normally 7 tankers move 170,-

000 barrels of crude daily from San Joaquin Valley and the Coastal District to Los Angeles and San Francisco. In November a 30,000 barrel line will be completed out of the Valley to San Francisco and a 40,000 barrel line is under construction between Ventura and Los Angeles. Also, two lines now serving Los Angeles from the Valley can be increased.

A 15,000-barrel line running from the Valley to Monterey may be restored to service and thereby shorten the tanker haul to San Francisco. An additional 15,000 barrels daily saving in shipments could also be realized by using local refining capacity in the San Joaquin Valley to serve marketing outlets in that territory.

By November the movement of crude out of the San Joaquin Valley both north and south by pipe lines can be stepped up by 60,000 barrels daily, it is estimated, which —added to 40,000 barrels daily from Ventura to Los Angeles— will eliminate 100,000 barrels daily of the 170,000 normally handled by tankship.

There is also a substantial movement of charging stocks between Los Angeles and San Francisco refineries and the extent to which this movement can be reduced is questionable. Some relief for this traffic may be provided, however, by moving these supplies in barges instead of tankers.

There are limitations to the extent of relief to be found from interchange of facilities and switching of cargoes between pipe lines and tankships, but it is generally believed that substantial savings can be made. After reviewing all eventualities, however, it is the consensus that the 130,000 barrels daily Pacific Northwest market as well as markets in Hawaii and Alaska are faced with some form of rationing when present working stocks have been depleted.

SHAKE-OUTS
From The News

Vacuum Oil Company was founded in 1866, so the history of the present Socony-Vacuum really goes back 75 years. An advertisement, perhaps the company's first advertisement, appeared in a Rochester City directory in 1867. It featured oil blacking for harness, boots, buggy tops, etc. It was not until 1906 that the first automotive oil advertisement appeared in the Saturday Evening Post.

»

Thomas Thornton Read, technican and editor, writing in the August issue of Nation's Business: "It [the oil industry] asks why it should be one of the first to be put under government control. The obvious answer is that, because of what has gone before, it is politically more feasible to reach out for control over it, in a program of increasing government control, than it is over others."

»

From January through July, 4,358,600 man days were lost in the United States because of defense strikes. At the rate at which defense work is being completed, this is equivalent to $29,480,000 of defense work which could have been performed if these "man days" had not been lost.

»

A plastic motor car body not radically different from conventional steel models has been completed by Ford Motor Company after a dozen years of research. Though it makes its appearance when a steel shortage threatens to cripple the auto industry's non-defense production, the plastic body is still in an experimental stage and substitution for steel is a long way off. The plastic, made entirely of ordinary farm crops, has an impact strength 10 times greater than steel. When mounted on a steel superstructure, the plastic car body has a weight of 2000 pounds compared with 3000 pounds for a steel body of the same size.

»

Since no known practical protection exists against a direct hit by aerial bomb on oil storage, D. V. Stroop, director of the American Petroleum Institute's Department of Engineering, states oil companies are working to reduce the hazards to a minimum and thereby confine such damage as far as possible to the actual spot struck by a bomb.

A 25-cent advance in Mid-Continent crude prices is not only justified, asserts W. A. Goforth, president of Oklahoma Stripper Well Association, but is necessary to provide sufficient incentive for wildcatting drilling needed to assure adequate reserves and in order to protect oil underlying present productive properties now being operated at a loss and therefore likely to be abandoned.

»

Within a 10-month period, a million square feet of floor space at Packard Motor Company has been equipped with 2200 machines to make Rolls Royce engines for airplanes—a record for a tooling up job of this scale.

»

Inefficient operation of tankers by Great Britain is responsible for England's great need of these boats and therefore for the current shortage of supplies along the Atlantic Seaboard, it was charged last week by James A. Moffett, who was secretary of the National Petroleum War Service Committee that handled overseas supply during World War I. Failure to load oil at the nearest source of supply is the chief reason for the tanker shortage, while restriction of convoy speeds is another important influence, Moffett declared.

»

Oil Workers International Union (CIO) has organized the majority of Sultana Drilling Company's drilling crews and has made a number of stringent demands on the company; one of which was for a "closed shop." The "closed shop" demand was declined, and consequently union men struck the same day and are still out.

»

The Texas Railroad Commission has granted the petition of the Texas Mid-Continent Oil & Gas Association for a reduction of railroad rates on oil-well-drilling outfits moving in Texas. This will simplify the billing of railroad shipments and effect a saving of 25 percent on present rates. For distances of more than 200 miles, the new rates are said to be cheaper than trucking rates that have been in force. The order becomes effective August 30, and provides for shipping in mixed carloads with one rate for the aggregate of all the articles which make up the drilling rig.

Tanker Handling . . .

The visit of "Pauley of Petrol" to England is reported to be tied up with the English tanker situation and the desire on the part of Coordinator Ickes that our English friends get the greatest possible efficiency out of the tankers they are using. Rumors continue to fly around that reports fixing the unnecessary lost motion on tanker movement at this percentage and that, have been made, and that Pauley will talk with the English about a tanker pool in which the United States will have some say as to operation. It is not necessary to add that these reports have had no confirmation.

During the past week a New York paper printed a report that in certain areas, tankers are being used by the English as storage. One hundred tankers were credited as acting as storage. This report, too, insofar as we can determine, has had no confirmation, nor does it appear a likely tale.

EDITORIAL COMMENT

Whose Emergency?

By RAY L. DUDLEY, Publisher

PRESIDENT ROOSEVELT during the past week, in his press interview, stressed the emergency facing the American people, and indicated that the people do not realize the situation we face.

We do believe that a great many people take the emergency talk with tongue in cheek, although only a casual study of the international situation in which the United States now finds itself is sufficient to cause the sober minded to know that the emergency is real.

But we believe we understand why a great many Americans do not realize the seriousness of the emergency, and how they can be brought to understand it.

They reason that if the emergency is as real as the President says, the government would not permit striking unions to tie up precious supplies desperately needed in our plan. They see pictures of wooden guns, hear of "simulated tanks," hear stories of men taken from useful occupations and put to training with, in many instances, the implements of war lacking for that training. They reason that if the emergency is so real, the government would take a stern attitude toward strikes vitally affecting Army or Navy supplies and equipment.

To the answer that a man has the right to strike at any time, and that the government cannot force a man to work, they reply that men have been taken, nilly-willy, from their jobs and put into the Army. They cannot make sense out of the proposition that the fellow who must risk his life can be yanked out of his job, while the fellow who does not risk his life can sit down and stop production of guns to arm the fellow risking his all, or even form a picket line and keep from work the man who wants to work.

They reason that either the emergency the President is talking about does not exist, or that labor leaders, many of whom appear to be guided by anything but the highest patriotic motives and some of whom appear to be little more than racketeers, are in the saddle—and the American people as a whole do not relish that kind of government. Mr. Roosevelt probably does not understand this, but it is true.

The public thinks that some of the steps taken to impress them with the emergency are phony. Failure to give out information which the public needs to inspire making sacrifices cheerfully, is confusing them.

The President has a conference with Churchill, at which everybody suspects something other than the price of good Scotch was considered, and then comes back and tells us that we are no closer to war than before the historic talk.

The President, in his "Abraham Lincoln" interview with the press, quoted Lincoln as saying that the North felt that somehow the war could be won by strategy, instead of sacrifice. It would not be amiss for the President to realize that now-a-days, some highly placed people think that the United States can buy victory for England by issuing appropriations, and that they are as mistaken as those who, in the days of Lincoln, thought that "strategy" could win the war.

A great many American people think that the President is bringing us nearer and nearer to war, drawing us closer and closer to it, as a diver is raised from below by stages to stave off the bends. A goodly percentage of American people have been ready for the United States to enter the war actively, but even among such people, there is a feeling that we should go to war, not be pushed into it by our leaders. And a greater percentage have the definite feeling that the President is not playing fair with the American people.

We believe that there is a real emergency. We do not believe in trying to sell the American people on it by artificial, phony means. We believe that much of the lack of morale in the Army, about which so much is heard privately, is caused by the failure of the government to do, among others, the very important thing of straightening out the labor situation.

In a Democracy legarthy is a usual characteristic until war is declared. Probably declaration of war will cure the poor morale in the Army, but if we should have a declaration of war and get into a shooting war, and labor remains as recalcitrant as some leaders apparently wish it to be, President Roosevelt will find an aroused public opinion operating along lines which will not be dear to his heart.

In commenting on the labor situation, it is only fair to say that we sincerely believe that most labor-union members are at heart thoroughly patriotic, that they are not in sympathy with strikes which disrupt the flow of supplies to our armed forces and our allies. We have heard some comments from labor men to the effect that if some labor leaders continue their unwise tactics, labor may lose many of the well-earned gains it has had during the past ten years. We think that they are right.

It is our thought and we believe that we are joined in it by a very large percentage of American citizenship, that the emergency is not just the tax payer's emergency. It is the President's emergency; it is Mr. Ickes' emergency; it is the emergency of the Army and the Navy; it is the emergency of the farmers; it is the emergency of industry, and it is the emergency of labor, rank and file and leadership.

But this does not mean that every American citizen should go into a dither. After all, when an emergency arises, what is the proper thing to do about it? Is it required for everybody to interrupt their necessary duties and go into a moaning huddle?

We have seen some emergencies in business institutions with which we have been connected and we have seen them solved. They were not solved by getting everybody excited and wrought up. They were solved by a study of the situation with as little fanfare as possible, by the executives working out a plan, with the majority of workers carrying on their regular duties except as their part in the solution might require their action.

If the administration's plan is to proceed to help England and other enemies of Hitler as far as we can with supplies, that is one thing. If it is to stir up support for a declaration of war, that is another.

But we think that if the President wants the American people to back him in a shooting war, he had better show that he knows how to run a non-shooting war.

Washington Roundup

Senate opposition to rationing and tanker transfer growing . . . Resolution for investigation introduced . . . Davies defends gasoline curtailment, declaring only ten-day supply remains on Atlantic Coast and tanker diversion justified

By B. F. LINZ, Washington Correspondent

STRENUOUS efforts of Deputy Coordinator Ralph K. Davies, head of the oil administration during the western vacation of Coordinator Harold L. Ickes, to defend the 10 percent cut in gasoline deliveries in the Atlantic Coast states marked a week in Washington which culminated in a serious threat of a Congressional investigation of the entire oil situation.

In support of the cut Davies asserted that there was but a ten days' supply of gasoline in storage along the coast. Critics, however, pointed out that he failed to reveal that a year ago there was only eleven days' supply or to explain that the drain on stocks depended entirely upon the volume of new oil brought in from the Gulf.

In Congress, the curtailment came in for attack from the delegations of practically all the coast states, winding up with the introduction by Senator Maloney of Connecticut of a resolution for an investigation, which he said would be pushed for prompt action.

Members of the isolationist bloc, who have engineered an investigation of alleged motion picture and radio propaganda in favor of United States intervention in the European war, immediately got behind the Maloney legislation, seeing therein a second opportunity to embarrass the Administration, and Republican members also gave assurance of their support.

Meanwhile, in a last effort to avert formal rationing, the marketing committee for District No. 1 met in New York to draft a program for application of the reduction, for submission to the coordinator's office for approval, but in the capital the impression gained ground that rationing was inevitable and imminent. Only by card, it was said, can the reduction—which may curtail civilian consumption by nearly 50 percent after the needs of the "preferred" groups are met—be applied equitably.

During the week, also, it became apparent that the shortage of tanker facilities was threatening to extend the shortage to asphalt, and there were indications that the defense agencies would impose priorities on that commodity in the near future, following announcement by President Roosevelt that asphalt would be placed under export control effective September 10.

In another move to boost tanker capacity, the Maritime Commission disclosed that it had placed orders for 15 large, speedy oil ships, to be produced by the Sun Shipbuilding and Dry Dock Company.

Rationing Opposition

Tanker diversions continue to be the subject of criticism in Congress, fanned by newspaper stories that England has a much larger fleet than actually needed and is using oil ships for commercial purposes, including the transportation of oil from the Netherlands East Indies to Japan. Reports on the number of tankers owned or controlled by Britain range as high as 600.

A resolution for investigation of the situation was introduced in the Senate August 19 by Senator Francis Maloney (D., Conn.).

The measure provides for the creation of a special committee of five Senators to "make a full and complete investigation with respect to the shortages of gasoline, fuel oil and other petroleum products in the various states, the methods that are being employed for the purpose of curtailing deliveries of such products for ordinary consumer use, and the most effective means that may be employed for insuring an adequate supply of such products for national-defense purposes without undue hardship to business enterprises and consumers generally."

"The situation is terribly serious, and threatens to become much worse," the Senator commented, in introducing his measure.

The Senate commerce committee was called to meet August 27 to consider the Maloney resolution, Chairman Josiah W. Bailey of North Carolina declaring the matter was one of such importance that there should be no delay in determining whether the investigation should be undertaken. If the committee decides to approve the probe, the resolution will be reported to the Senate for action as soon as Congress reconvenes after Labor Day.

At Hyde Park, President Roosevelt, informed of the Maloney resolution during a press conference, said there was nothing to hide about the diversion of tankers, except details which might be of military value.

Introduction of the Maloney resolution brought into the open the opposition to Ickes' rationing program which has been growing in Congress for some weeks.

The measure laid the groundwork for a finish fight, Senator Maloney asserting that he would press for speedy action.

"I want to learn if there is an actual shortage or if we are being pushed around for psychological reasons," he said.

Senator D. Worth Clark (D., Idaho), prominent member of the isolationist bloc, indicated that the non-interventionist group would support the inquiry, declaring he was especially interested in learning if it were necessary to cut American consumption in order to supply Britain with fuel, or if such steps were being taken to emphasize the "all out" viewpoint of aid to England.

Senator Charles L. McNary (R.,

Ore.), minority leader, predicted there would be almost solid Republican support for the measure in the Commerce Committee, to which it has been referred.

Also pending in the Senate is a bill introduced a week earlier by Senator Charles O. Andrews (D., Fla.) to take oil control out of Ickes hands and turn it over to a new office to be responsible to Congress.

Tanker Situation

Charges that England has a large number of tankers, with which she is continuing her pre-war world oil trade, were met August 21 by Deputy Coordinator Davies, who denominated such reports as "totally and completely false."

Davies charged that unidentified interests were "deliberately" circulating misleading figures to confuse the public, and contended that every tanker transferred to British service was needed for continuance of the war effort.

The reports that the transfers were unnecessary "do not square with detailed figures submitted by the British," it was asserted. Complete information regarding the British tanker situation has been made available to the oil administration by British authorities. He did not give any actual figures on the number of oil ships available to England, however, holding that they involved vital military information.

"However," it was explained, information made available to the office of the Petroleum coordinator indicates that the number of tankers rounded up by the British at the outbreak of the war was not as great as has been reported, and that losses, the withdrawals for repairs, and the need of oil supplies for war operations over a large area, have drawn the British tanker fleet down.

"Tankers are needed by the British to supply military, naval and war industry demands over the whole world; to build up war stocks; to provide bunker oil for shipping and to deliver oil to many parts of the world in order to maintain essential war industries.

"These large requirements, absolutely indispensable to the war effort, have made American assistance necessary to supplement the entirely inadequate number of tankers otherwise available to the British.

"No one in the Federal Departments concerned has acted blindly," Davies asserted. "Through direct access to British figures and information, through the direct reports of American observers working on the spot, and through ample evidence, the Government has full knowledge of the actual facts of the British tanker situation.

"Statistics involving national security obviously cannot be made public. It can be said, however, without qualification, that figures now being circulated by unofficial sources are wholly and completely false.

"The inadequacy of British and allied controlled tankers to fulfill their war-time tasks as indicated by conclusive evidence in our hands is such as to warrant fully the transfer of American tankers to aid in the transportation of oil. No one should be deluded about this fact."

Apparently convinced that tanker needs of the future will be even greater than heretofore anticipated, the Maritime Commission has added fifteen 11,000-ton tankers to the orders for 72 such vessels already held by Sun Shipbuilding & Dry Dock Company, Chester, Pa., it is disclosed by the commission's latest building progress report.

Expansion of the tanker-building program was seen in Washington as indicative of the commission's realization of future possibilities of need for additional oil-ships by the British, the necessity for preparing for increase in facilities to fuel the building two-ocean Navy or the possible involvement of the United States in the war, or all three.

Tank Cars

Failing to locate the large number of tank cars which had been reported available on the railroads of the East and Middle West, Deputy Coordinator Davies on August 22 called on the industry to ascertain how many such cars are idle and available for use, then to press them into service without delay.

Davies called attention to reports which have been made in congressional and other quarters that large numbers of tank cars were laying idle on the railroads; said he had been unable to find them, nor could the railroads, trade associations or the industry. Such cars as have been found have been put into service, he said, but contract commitments, use by other industries and other factors have prevented the use of any large number of cars.

He sent his recommendation for a survey to the general, refining, transportation and marketing committees of District No. 1, and to the companies in the famine area, at the same time urging that the committees encourage the use of barges, tank cars, pipe lines and trucks as a substitute for tankers.

Davies discussed the situation in the third statement to be issued by him in as many days.

"The coordinator's office has been trying for the past four weeks and longer, with all the ability at its command, to ascertain the tank car situation as it fits into the attempt to utilize fully all available methods, other than by tanker, of bringing oil into this area," he said.

"Railroad, trade associations, and other groups repeatedly make the statements that there are a considerable number of surplus cars which could be used as a substitute for tankers. To date, both the efforts of this office and those of the industry to press these cars into service have been unavailing.

"Although we are convinced that there are idle cars available for use in alleviating the East Coast shortage, no one seems able to produce them when we ask that this be done. The industry is ready and able to utilize surplus cars, but so far at least, it hasn't been able to get them."

Rationing

The menace of formal rationing of the East grew more imminent during the week, conjured up by Deputy Coordinator Davies in an announcement that gasoline stocks along the coast were sufficient for only ten days' supply.

Davies made no secret of the probability — almost a certainty — that conditions were due to grow worse.

"This is the beginning of the sharp and serious drop in supplies that we forecast," he said August 20. "Figures which have become available today show that reports that stocks on the East Coast are in firm and safe condition are myths."

Two-thirds of the gasoline in storage is unavailable for use, he told the public. Of the 20,476,000 barrels counted last week, roughly

14,000,000 barrels were unavailable because at the bottom of tanks, full of sludge, in technical process in refineries, etc., leaving only 6,476,000 barrels for consumption. Inventories during the week ended August 16 fell 893,000 barrels, it was said.

Furthermore, the oil administration reported, stocks of heating and fuel oils are 1,400,000 barrels lower than a year ago and stocks of heavy industrial oil are approximately 2,500,000 barrels less, in the face of a ten percent increase in demand.

As of August 9, it was stated, 14,253,000 barrels of crude were in storage, only 8,000,000 barrels of which, however, was available; 9,035,000 barrels of heavy burner oil were reported as of August 16 and, on the same date, 14,432,000 barrels of domestic heating oil. At the corresponding time last year there were 22,214,000 barrels of gasoline, 11,503,000 barrels of heavy industrial oil and 15,851,000 barrels of domestic heating oil in storage.

Meanwhile, it was declared, daily gasoline shipments from the Gulf Coast are running only approximately 75 percent of requirements — 340,300 barrels a day shipped during the week ended August 9 against a requirement of 461,500 barrels.

"Certain stock figures being circulated include oil positively earmarked for defense purposes which oil is unavailable for domestic consumption," it was asserted. "These figures, therefore, are misleading. Figures made public today by Davies show these circulated reports to be 'phony'."

"The figures that we have received from the industry show the danger to be very real. While to the layman, the figures might seem to indicate ample supplies, to the informed and to the industry they are signals of danger."

The full effect of the situation, he said, will be felt as winter approaches, when every possible tanker will be set to carrying fuel oil. The choice, he intimated, has been between gasoline and heating oils, and the administration has decided to sacrifice the former that the public may be saved from freezing and defense industries from shutting down for lack of power.

Immediately following announcement of the restriction on deliveries, Ickes "enlisted" the filling station operators in the affected area to obtain a "just and equitable distribution" of available gasoline supplies, saying that they can no more fail in this task "than can a soldier, a sailor or a worker in a vital defense industry."

Telegrams also were sent to the officials of 17 of the largest eastern cities, asking them to prohibit "cruising" by taxicabs.

The job of laying down the definite plan for distribution of the reduced gasoline supply was placed by Davies in the hands of the District 1 marketing committee August 18, and three days later that group met in New York to consider the matter.

Davies asked the committee to determine how much gasoline would be left for the general public after service is given to the "preferred" groups, and then to set up the "uniform percentages of curtailment necessary in particular areas for all non-preferred deliveries to and by service stations."

To enable the companies to carry out the requirements of the OPACS reduction order, Davies issued formal rules that "all suppliers shall loan, exchange, purchase or sell sufficient quantities of motor fuel to equalize as between themselves the percentage of curtailment which each is required to impose upon different classes of trade, including other suppliers, service stations and consumers, such equalization, however, to be such that the sum total of all motor fuel supplied to the Atlantic Coast area shall not exceed that permitted in the Civilian Allocation Program."

Speedy development of a definite program was seen as essential if the "quota" of gasoline for the remainder of August was not to be exhausted before the end of the month.

Reports to Washington indicated that the curtailment order had failed to stem demand and that in many areas filling-station operators feared total exhaustion of their August quota by August 27, threatening the vacations of hundreds of thousands of persons planning to take advantage of the week-end holiday.

Resentment over the limitation of the reduction to the East was evidenced in proposals that curtailment be made national. In the large cities, station operators, faced with dwindling supplies, limited sales to five gallons, in some cases; in others, served only regular customers, and talked of Sunday closings to conserve stocks.

No Alcohol Fuel

Advocates of the use of alcohol in gasoline to offset the shortage of the latter on the East Coast were set back on their heels during the week, when defense officials revealed that the country faces an acute alcohol shortage.

One of the most serious results of the situation, from the standpoint of a goodly portion of the oil industry, is the possible curtailment of production of what are known in the refreshment trade as spiritous liquors.

Others who may be affected, however, include the manufacturers of anti-freeze solutions, paints and varnishes, also widely used in the oil industry but for different purposes.

The Commodity Credit Corporation of the Department of Agriculture, holding some 20,000,000 bushels of corn on which the Government has loaned money, has offered to turn it over to the War Department for the production of alcohol, and during the week OPACS officials called in the distillers to determine what capacity can be diverted from other products to the making of alcohol for munitions and other defense purposes.

Measures for mandatory mixing of alcohol with gasoline have been sought in Congress over a period of years, and currently a bill sponsored by Senator William Langer (R., N. Dak.) is pending.

Efforts of the oil administration to reduce the consumption of gasoline were seen by supporters of alcohol-gas mixtures as a major opportunity to expand the market for farm products, and suggestions had been made that the plan be adopted to ease the Eastern shortage.

However, it was learned that the scheme has not received any sympathy from Administration officials, who believe it is not feasible under our economic set-up.

While it is admitted that European countries have adopted alcohol fuels with more or less success, it is pointed out that their situation with respect to gasoline supply is very different from that in the United States, where, normally, gasoline is plentiful and cheap.

Indications are that in view of the fact that the gasoline shortage is expected to be cleared up in less time than it would take to get pro-

duction of alcohol under way, and particularly in view of the shortage of alcohol, no effort will be made to undertake the adoption of alcohol-gasoline mixtures in the near future.

Steel

Arrangements by which manufacturers of steel drums and containers will be able to obtain enough plate to fill defense orders from the oil industry during the next two months, while a permanent program is being worked out, were announced by the OPM August 22.

The announcement followed a series of meetings with a committee representing the industry, at which the difficulties manufacturers are experiencing in getting sheet steel were discussed.

The OPM now has provided that manufacturers shall make application for their requirements to meet orders during September and October on the basis of two-thirds of their normal consumption, and will be given A-5 priority ratings.

RFC Money

The Reconstruction Finance Corporation stands ready to advance as much as $64,000,000 to the oil companies participating in the construction of the proposed $80,000,000 pipe line from Texas to the New York-Philadelphia area, it was disclosed August 19 by Federal Loan Administrator Jesse Jones.

Jones said the RFC, if requested, would advance 80 percent of the money required for the line. However, he added, the companies have not asked assistance.

"They may get the money from the banks," he said. "I hope they do."

The administrator refuted suggestions that the Government might wish to participate in the financing of the line so that it might have a say in its operation after the passing of the emergency, declaring that the Government is "amply protected" not only during and immediately following the emergency but "for all time."

It is immaterial, he said, whether the line is built by the industry or the Government, so long as it is constructed quickly.

Aviation Gasoline

With his goal the doubling of present aviation gasoline output, Ickes has informed the industry that it will be called upon to supply all the 100-octane gasoline necessary not only for our own enlarged air force but for the British, Russian and Chinese air forces as well.

Nothing less than a 100 percent increase in production will make this possible, in the view of oil administration officials who have been conferring with refining representatives.

The necessary plant expansions will be undertaken by the industry, but there was some question whether the companies themselves could finance all of the program in view of the other projects which are being undertaken, and it is probable that in some instances government funds will be advanced to enable quick construction of new refineries.

Manual

A procedure manual which will expedite the conduct of business between the coordinator and industry advisory committees in their joint effort at solution of oil problems was issued August 22 by Davies. Copies of the manual are being sent to all members of the general district and four functional committees in each of five regions which together include the entire nation. It sets out the procedure to be followed by the committees in handling problems both in the field and in conjunction with the coordinator's office.

Army Economy

Standardization of Army petroleum requirements has been ordered by the War Department in an effort to simplify the problem of supplying mechanized forces in the field.

The problem has been under study for several months by a department committee on liquid fuels and lubricants, with a view to reducing the number of grades of motor fuel and lubricants and reducing the cost of maintaining the vast number of cars, tanks and trucks which are now being acquired.

Under the new plan, a high-test, 80-octane gasoline similar in quality to high-test commercial fuel will be the standard type to replace four varieties formerly used. The gasoline was selected after tests which showed that the better mileage secured as compared to lower-test fuels, will actually make it less expensive to the Government.

Fuel oils for Diesel-powered vehicles will be reduced from four to three varieties, and lubricating oil for such machines also has been standardized. Lubricating oils for gasoline vehicles are cut from ten types to three.

Airplanes and medium tanks which use airplane engines will continue to use the same type of aviation gasoline as heretofore.

Department officials said that the plan will involve no mechanical changes in motor vehicles now in use, although the adoption of one standard of gasoline may influence design in the future. Savings will be accomplished by simplification of the storage and distribution problems as well as in the procurement of the products themselves.

Asphalt Shortage

Reports to Washington during the week displayed apprehension over a possible shortage of asphalt as a result of the tanker deficiency which is making it impossible for the industry to move as much crude to asphalt manufacturing plants on the East Coast as is required to meet expanding military and civilian requirements.

The material is widely used in the building of Army cantonments and air fields, and Government purchases have been so heavy that some manufacturers have curtailed sales to private buyers, it was reported.

Imports of asphalt have been almost entirely eliminated as a result of the tanker shortage, it is said, only 29,300 tons being brought in during the first five months of this year against a total domestic demand of 1,649,000 tons. Production has been stepped up considerably by the East Coast manufacturers, now turning out something over 217,000 tons a month, but Army demand has been so great as to leave but little for commercial sales, and some municipalities have been unable to get asphalt for street work.

It is expected that if the situation continues unchanged, priorities will be imposed on asphalt. Government purchases are expected to reach their peak next year, at a time when tanker facilities probably will be at their lowest.

The first step toward conservation of supplies was taken by President Roosevelt August 19, when he signed a proclamation adding natural asphalt or bitumen to the list of commodities subject to export control.

Confusion Exists Over "Aviation" Gasoline

AN INTERESTING story lies behind the effort of the oil industry, spurred on by Coordinator Ickes, to double the output of 100-octane gasoline as quickly as possible, bringing the daily output up to 70,000 barrels per day.

To begin with, there has been some confusion in the public mind, and in the oil industry's mind as to what is meant when reference is made to aviation gasoline. This confusion has not been lessened by the inability of the armed forces to stay put on what they wanted as aviation gasoline. Thus when one person talked about aviation gasoline, he meant all gasoline from 87 to 100 octane, and another only 100-octane gasoline.

More than a year ago Dr. Robert E. Wilson, petroleum consultant to the Office of Production Management, in discussing the state of preparedness of the oil industry, indicated that 100-octane gasoline, needed primarily for use in flying, might prove a bottleneck. At that time there was considerable speculation as to how much aviation gasoline the government would need, and if there were any estimates of such needs made by the government's Army or Navy arms, they were not made public. One-hundred-octane gasoline was a comparatively new proposition, and while production was in excess of the demand at that time, the future was uncertain because nobody had an authoritative guess as to what might be needed. In other words, no program was given to the industry.

By June of this year the Army-Navy were meaning 100-octane when they referred to aviation gasoline. Some time before this, it was planned to use 91-octane and 100-octane by the Army-Navy air forces. (Within the past week the decision was made to use 100-octane gasoline on all planes and medium size tanks which are equipped with airplane motors.)

In June a conference was held on the question of the aviation-gasoline supply, particularly the 100-octane, as there seemed to be plenty of 87-octane which, in Bureau of Mines reports, also is classified as "aviation gasoline."

At this June conference it was reported that the daily capacity to produce 100-octane gasoline was 35,000 barrels per day, with 3000 barrels additional facilities under construction. Dr. Wilson suggested that an increase of approximately 25 percent, bringing the daily total up to 50,000 barrels, would be sufficient. Army-Navy representatives are reported to have said it would be better to step the production up to 100,000 barrels per day. However, a year ago, and even last June, although the government was telling owners of alkylation plants (used in making 100-octane gasoline) that they should not make long-term contracts on alkylation products, the government was not making long-term contracts itself with all producers, and under such conditions few wanted to take a chance on the construction of an expensive alkylation plant.

Incidentally, if one may judge from Bureau of Mines reports, the full 100-octane capacity was not being demanded in June, 1941.

A short time later Coordinator Harold L. Ickes came into the picture. He was not in agreement with Dr. Wilson's suggestion. At this time he believes that 70,000 barrels per day of 100-octane gasoline will take care of the emergency as it is seen. Actually, in May, overall production of 87- to 100-octane gasoline was 1,573,000 barrels. Domestic demand was 647,000 barrels, exports were 373,000 barrels, 264,000 barrels were transferred out of aviation-gasoline classification to commercial-gasoline classification because of lack of demand, and stocks increased 289,000 barrels. There is a report current that about half of the 1,573,000 barrels refined in May was 100 octane. This would be slightly in excess of 25,000 per day, or about 10,000 barrels daily less than the rated capacity on 100-octane gasoline June 1.

A study of the situation develops the interesting report that the Army and Navy used between 5 and 6 million barrels of all kinds of aviation gasoline last year. It is reported that this consumption may be stepped up to 10,000,000 barrels of 100-octane gasoline next year. Another report puts England's consumption of aviation gasoline last year at about par with that of the United States. England, we hear, may be using at the rate of 10 million barrels a year by next summer.

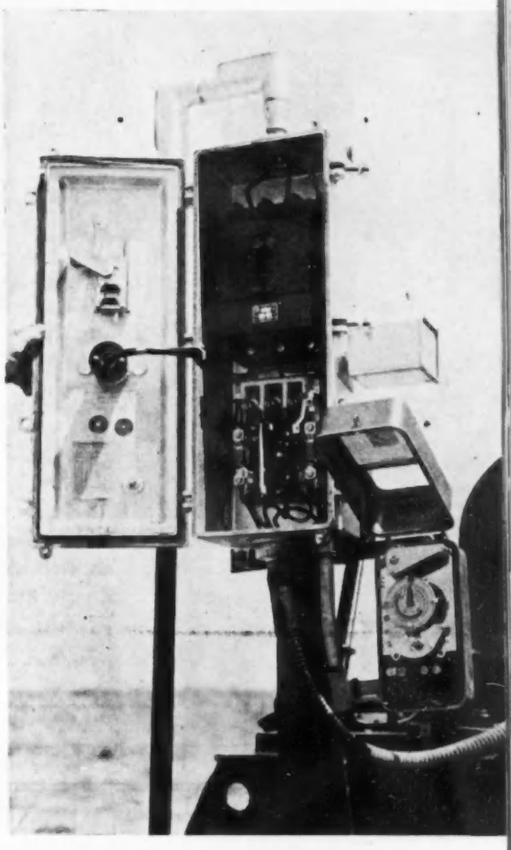
If production of 100-octane gasoline is stepped up to 70,000 barrels per day, this would be at the rate of about 25,500,000 barrels per year. This would leave an excess of about 5,500,000 barrels for the 12-month period, not counting aviation gasoline production in friendly points outside the U. S. A.

However, Russia has put in a request for aviation gasoline to the extent of 1,720,000 barrels. This is almost equal to present West Coast stocks. It is reported that the Russians will be granted their request.

The refining committee for the Southwest, where most of the 100-octane gasoline is made, (the committee appointed by Ickes) held a meeting in Houston on Tuesday of last week. The aviation-gasoline problem is reported to have occupied the committee's attention.

A stepping up of the production of 100-octane gasoline will call for construction of a considerable capacity of alkylation plants or plants making a comparable product. It will also call for the stepping up of cracking construction, not to mention the encouragement of recycling plants with high-octane products. Ickes is reported to have expressed the opinion to refining men that the major companies should take on their share of this new construction without financial aid from the government. He is quoted as having said, however, that he would like to see some smaller companies participating in the program, and to have indicated that they probably would get financial assistance from the government. Steps to accomplish this have been taken.

Electric clocks that automatically start and stop the well at previously determined regular intervals are being installed in some of the West Texas marginal, as well as prorated wells. Lifting costs have been lowered, number of pulling jobs reduced, and generally improved operating conditions resulted.



Time Switches

Control Periodic Pumping of Marginal and Prorated Wells

By GILBERT M. WILSON
Staff Writer

THROUGH installation of electric time switches, which automatically start and stop pumping operations at predetermined intervals suitable to individual well characteristics, the mechanical difficulties usually associated with continued operation of marginal wells after they have been pumped off are being avoided, and prorated wells are being shut down upon producing their daily allowable or started when desired without manual attention. By relieving the pumper of these starting and stopping duties, he is given additional time to cover his territory and properly service a greater number of wells. Thus, less frequently pulling jobs and appreciable reductions in other lease expense are resulting.

Nearly every gas-drive oil field eventually passes through a stage in which low fluid levels, comparatively high gas-oil ratios, and sanding up or emulsion difficulties begin to occur at more frequent intervals, raising the lifting costs of each barrel of oil produced. Low fluid levels, or conditions in which the fluid level is lowered to the pump intake soon after the pump is started, cause many producing problems. When the fluid level is at or near the pump intake, free gas has a tendency to by-pass the fluid as the latter enters the pump barrel, usually resulting in the cutting and scoring of the balls and seats. Pump barrels sand up much easier (if the well produces from a sand formation), and because the

traveling valve "pounds fluid" on each down stroke, emulsion troubles usually result.

Commonly accepted methods of combating such problems consist of slowing the pump down so that fluid withdrawal more nearly approaches the rate at which the fluid enters the well bore, and in carefully checking the well performance in order to determine approximately when the well starts to pump off, after which the pump can be shut down for that day. The problems attendant with such a procedure on large leases make it difficult, and at times impossible, for the pumper to be at a particular well at the time it starts to pump off. As a consequence, some wells are neglected too long, others are shut down too soon, and it is generally difficult to maintain steady or constant schedules.

In attempting to solve many of the difficulties of this nature on certain of their marginal-well class leases in West Texas, one large company did considerable field research work, and finally began installing time-clock switches, which start and stop the well at previously determined intervals. Since the wells are pumped with electrically driven units, the adaptation of the automatically operating switches to each well was not a great problem, most of the work having been involved in the study of each well's particular characteristics, and determining just how long, and at what intervals the well should be operated.

The time clock, containing a mechanism which trips a switch at any desired number of points around the face of the clock dial, is contained in a small metal box which is bolted beside the standard supporting the main pump switch. As the hand on the clock makes contact with one of the predetermined points, it closes an electric circuit energizing the magnetic switch in the main switch box, thus starting or stopping the pump motor. It is possible to operate the switch manually should it be necessary at any time.

Pulling Job Record on Lease In Estes Field

	Number Pumping Wells	Number Pulling Jobs
First Quarter 1940	20	20
Second Quarter 1940	22	21
Third Quarter 1940	27	12
Fourth Quarter 1940	29	28
First Quarter 1941*	29	18
Second Quarter 1941*	29	17

* Automatic time switches installed.

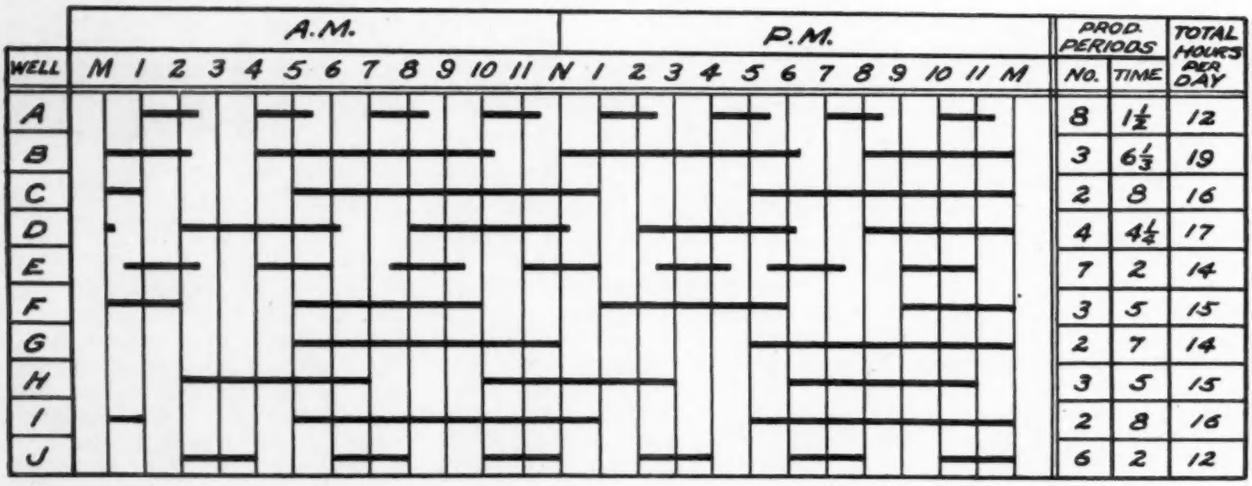
The largest number of installations made by the company has been on a lease in the Estes field, Ward County, where 29 wells have so far been equipped with clock controls. The first clocks were placed in service in October, 1940, while the remainder were installed in the following December and January.

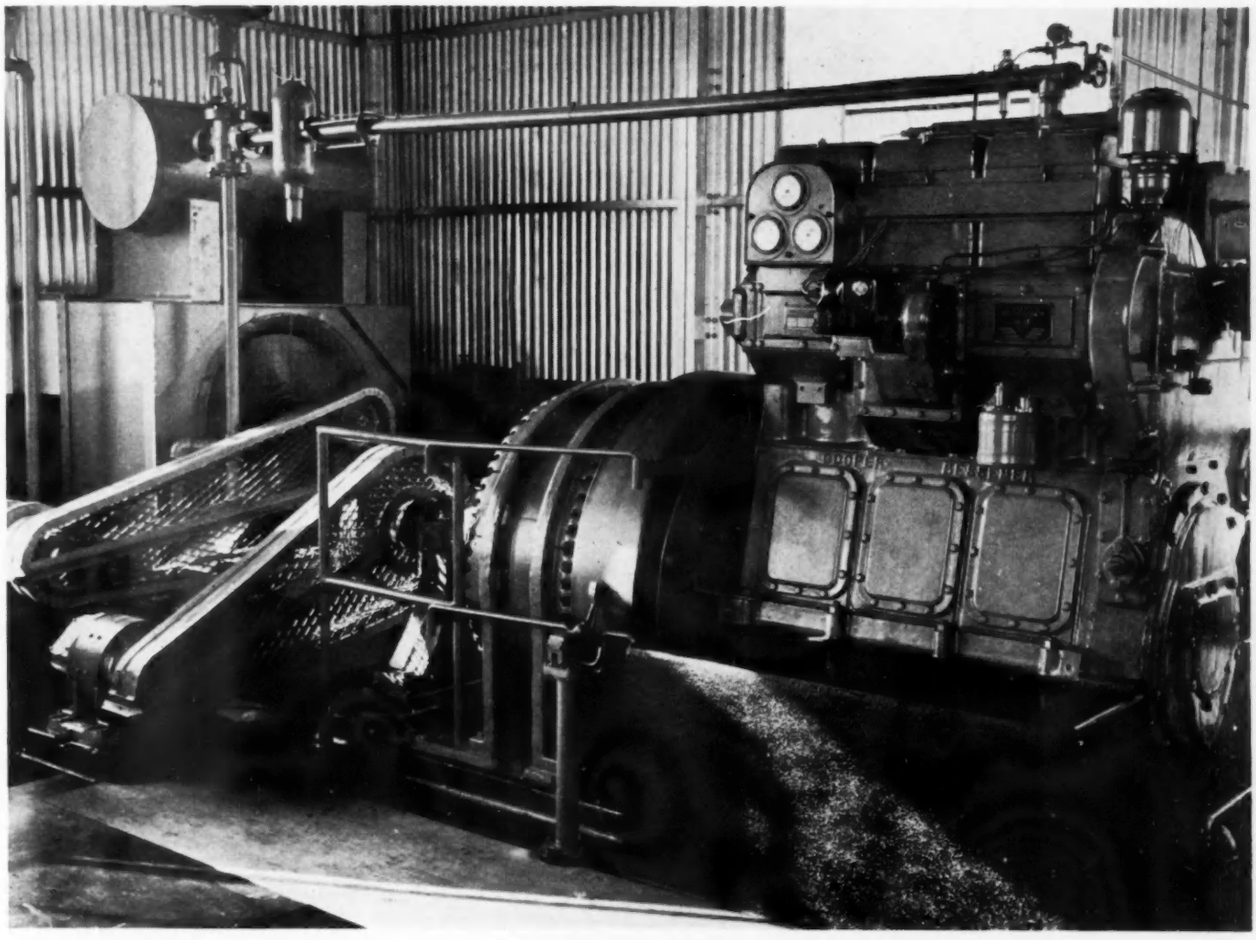
Most of the wells on which the clocks have been placed are strictly marginal, the average production being around 8 barrels per well per day. Production is obtained from either of two sands at 2550 and 2900 feet. Gas-oil ratios average 6000 cubic feet per day, and that factor along with the scouring action of fine floating sand has proved to be the main source of considerable valve ball and seat cutting trouble. Sanding up of the pump barrel also was a common trouble experienced because of the low operating fluid level. Pulling jobs to replace worn pump valves and clean out sand, were necessary an average of between three and four times a year, an expense that was not in line with the low rate of production. Although the water cut averaged only 1 percent over the field, emulsion troubles were being experienced because of the excessive pounding action of the traveling barrel on the partially filled barrel of oil on each stroke. When the wells operated any length of time after having pumped off, polished rod stuffing boxes became hot, creating a fire hazard unless the pumper happened to arrive at the proper time.

Since the installation of the clock-switch system, however, lifting costs have been lowered considerably, with pulling jobs occurring at less frequent intervals, and other lease expenses have been cut appreciably.

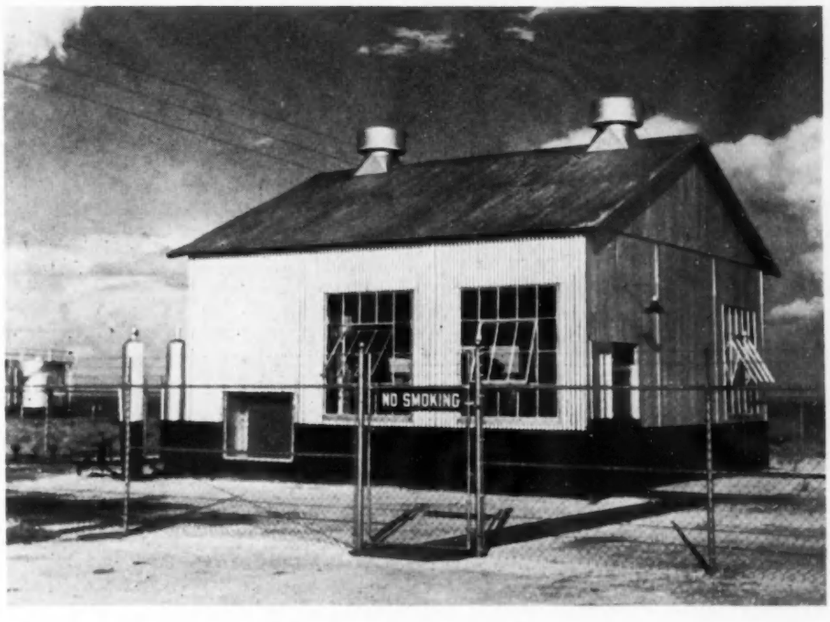
Following the study of the operating characteristics of each well, including the accurate gauging of production over short intervals to determine when the well starts to pump down and pound fluid, checking operating bottom hole pressure if necessary, and observing the effect of different lengths and speeds of pump strokes, the pumping schedule was worked out, with provision having been made for the automatic starting and stopping of the pump at several different intervals. The average optimum speed finally determined was

TIME SWITCH PUMPING SCHEDULE





Electric generating plant for the lease is a 94-kva, 75-kw unit driven by a 90-horsepower, 3-cylinder gas engine. This unit is housed in the building below.



12 strokes per minute, with 32-inch stroke.

Prorated Wells Also Benefited

The use of the clocks are not limited to the marginal wells, however. Prorated wells, or those wells under curtailment, also are being equipped with this automatic system. As a result, pumping loads are more easily counterbalanced and smoothed out, and the fluid is being withdrawn at a more constant rate, an important consideration in prolonging the ultimate producing life of the well. Another important result of the establishment of a definite pumping schedule or program for each prorated well, may be seen in the fact that there is no possibility of any one well producing any more than its own allowable. It is well known that in many instances, if a close check is not made on the operations of individual leases, there is a tendency for the pumper to obtain most of the allotted daily production from only a comparatively few wells in the vicinity most convenient to his line of travel, resulting in an uneven and injurious rate of withdrawal from that part of the structure.

Besides the factors listed above that are resulting in an appreciable saving in operating expenses, is the fact that the pumper can cover more territory and service more wells during his tour, as a result of the ability of the pumping units to start and stop without his having to be at the particular wells at a certain time. Mileage of the service cars is also reduced, and while the daily saving is not an

appreciable amount, the saving over a period amounts to a worthwhile economy in operating costs.

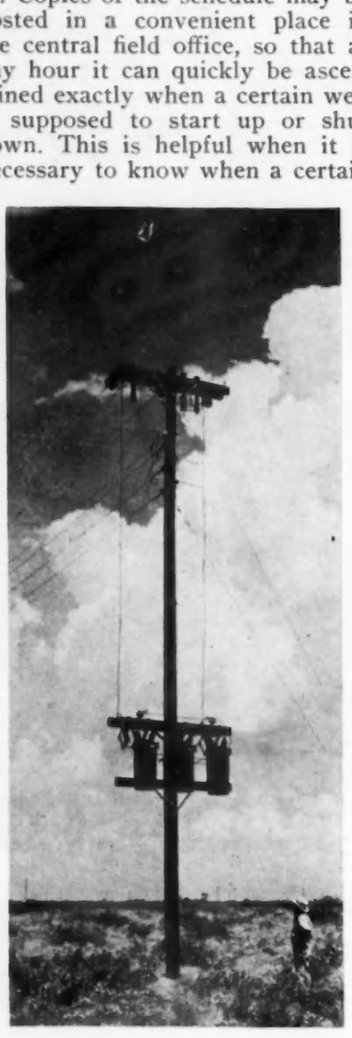
In the Kermit field, an 84-well lease owned by the company also is being equipped with the automatic clock system. To date only 28 wells have been equipped with this feature. The wells showing evidence of having the lowest operating fluid levels are being favored to begin with, and the remainder are scheduled for being equipped just as soon as orders can be filled. Defense program operations of the company manufacturing the clocks are slowing deliveries.

Gas-oil ratios in this sand-producing field average about 5000 cubic feet per barrel, and as this field also is beginning to show evidence of rapidly declining fluid levels, with a corresponding lowering of production rates, it is believed that the producing life of the lease will be lengthened and benefited considerably through the use of this system. A 32-inch stroke at 12 strokes per minute is an approximate average of the finally determined pumping conditions of the clock-equipped wells.

Constant Fluid Withdrawal

Many wells that have been equipped with this automatic system have actually begun to show a slightly higher daily rate of production than had been shown before. When a formation is producing fluid at as nearly a constant rate as possible, thus maintaining a more or less constant differential in pressure between the sand face and the well bore, the movement of oil and gas toward the well from back in the formation will proceed at a more nearly uniform rate. Any tendency for the gas to by-pass the oil in the sand interstices, especially in fields that are troubled with higher-than-normal gas-oil ratios, will thus be minimized, resulting in a more efficient use of the driving energy of the gas. When a well approaches the point of being placed in the "marginal status," it often is wiser to accept that classification and produce the well more moderately, than it would be to try to pump every barrel possible, with such action inevitably resulting in higher lifting costs, and probably bringing about earlier abandonment.

Pumping schedules for all clock-equipped wells in a particular field are prepared and laid out in an easily-read, graphic form (Figure 1). Copies of the schedule may be posted in a convenient place in the central field office, so that at any hour it can quickly be ascertained exactly when a certain well is supposed to start up or shut down. This is helpful when it is necessary to know when a certain well is to be placed on special or routine gauge, and since the schedules of the other wells are graphically shown on the same sheet, a gauging routine for that day can be easily worked out.



High lines distributing the power throughout the lease are designed with 6900-volt at the top of poles, while 440-volt wires are strung from lower levels. Transformers are set low for convenient access.

From time to time certain of the wells on scheduled pumping are closely checked to determine if conditions have changed sufficiently to warrant readjustment of the existing schedule. It might be that a well that had been pumping 5 hours on, 3 hours off, and repeating through its 24-hour schedule, might be found to be pumping off, or at least pounding fluid fairly hard, a short time before its 5-hour pumping period ended. In such cases it might be found to be more desirable to adjust the clock so that the well pumped 4 hours on and 4 hours off, an adjustment that probably would result in practically the same production, and at the same time smooth out the pumping load, and eliminate a pulling job that might possibly occur as a direct result of such uneven pumping conditions.

Generating Plants Use Gas

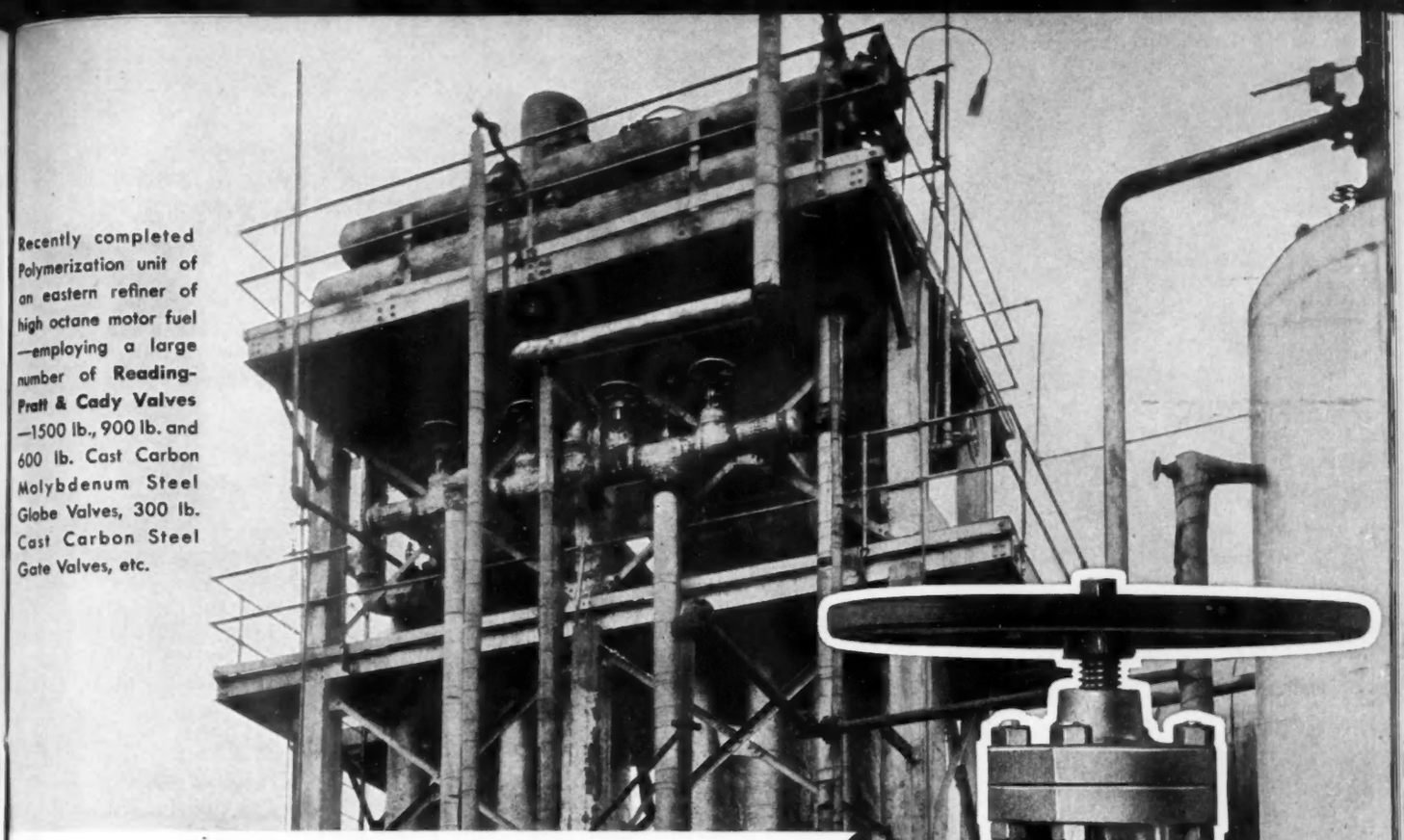
The company uses its own electric generating system. Dry gas from the field gas system is burned in the engines that drive the generators.

The Estes field plant has a single unit consisting of a 94-kva, 75-kw generator driven by a 90-horsepower, 3-cylinder gas engine, with an average power of 22,000 kwh per month. The rated fuel consumption of the engine is 20 cubic feet of gas per horsepower-hour.

The Kermit field plant is larger, since more wells in this field are on the pump, although not all of them are as yet on the automatic clock system. This plant has two synchronized units. The first consists of a 125-kva, 100 kw generator driven by a 150-horsepower, 3-cylinder gas engine, with a monthly output of 38,000 kwh. The second unit, installed at a later date, in the same building, consists of a 156-kva, 125-kw generator driven by a 200-horsepower, 4-cylinder gas engine, with an output of 45,000 kwh. This plant supplies electricity to the company camp, besides the wells on the lease.

The generators supply current at 440 volts, but this is stepped up to 6900 volts for field distribution by means of a step-up bank of transformers at the plant. These primary high voltage lines are carried to a number of centralized points throughout the lease, where other banks of transformers step the voltage down to 440 volts for distribution to the individual wells. Each of these secondary transformer banks handles the current for 5 to 7 wells, and usually consist of 3 10-kva units.

Provision is made on the power poles for carrying the primary lines on the top cross-arm, while the secondary lines are strung along a lower level. All conduits leading from the poles to the wells are buried, in order to reduce the hazards that would ordinarily be present when the wells are being pulled. The individual well motors are ordinarily 5-horsepower size, all enclosed and weather-proof.



Recently completed Polymerization unit of an eastern refiner of high octane motor fuel —employing a large number of **Reading-Pratt & Cady Valves** —1500 lb., 900 lb. and 600 lb. Cast Carbon Molybdenum Steel Globe Valves, 300 lb. Cast Carbon Steel Gate Valves, etc.

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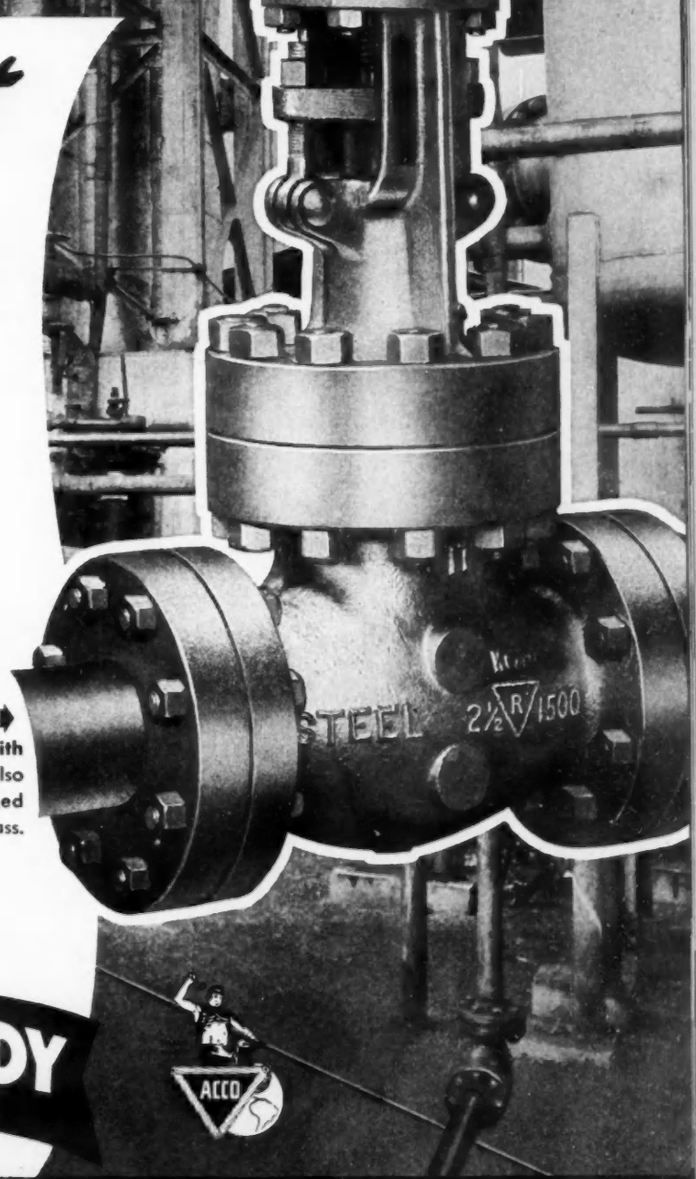

Fig. 15011 Cast Carbon Molybdenum Steel Globe Valve with Stainless Steel Trim. Primary rating: 1500 lbs. at 900° F. . . . Also available with screwed ends, screwed ends with By-Pass, flanged ends with By-Pass, Welding ends and Welding ends with By-Pass.

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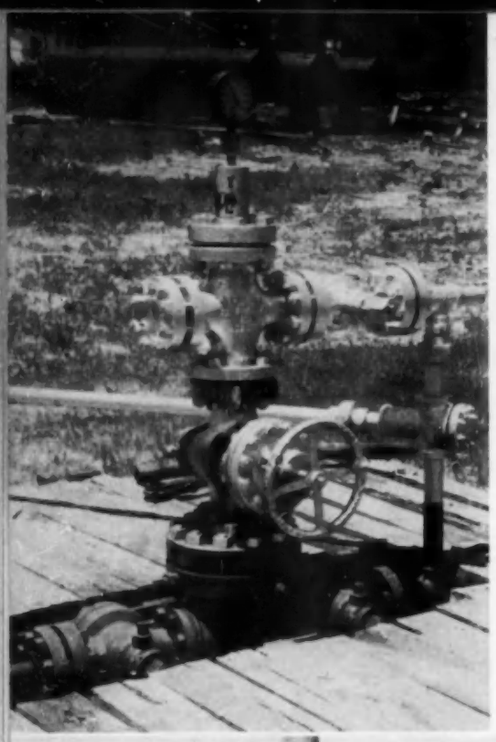
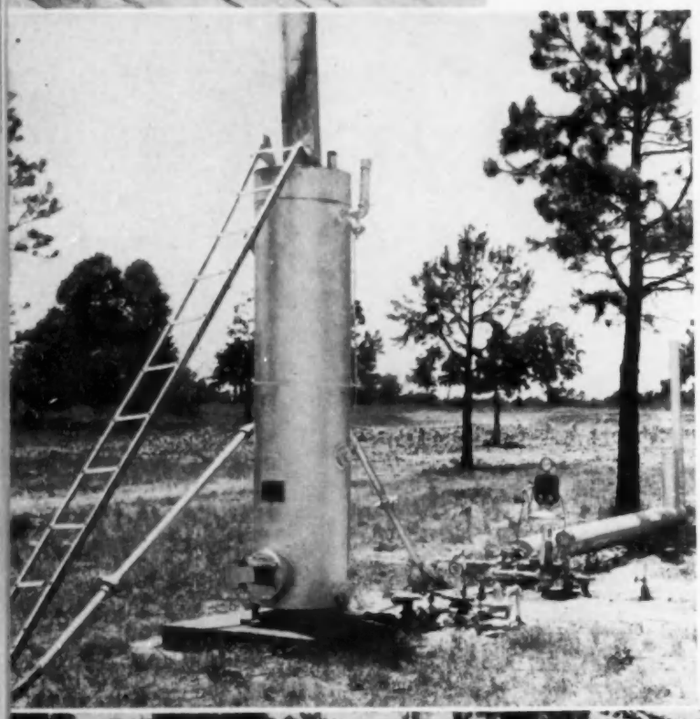


Flow of Distillate Wells

Requires More Complicated Equipment And More Careful Handling Than Oil

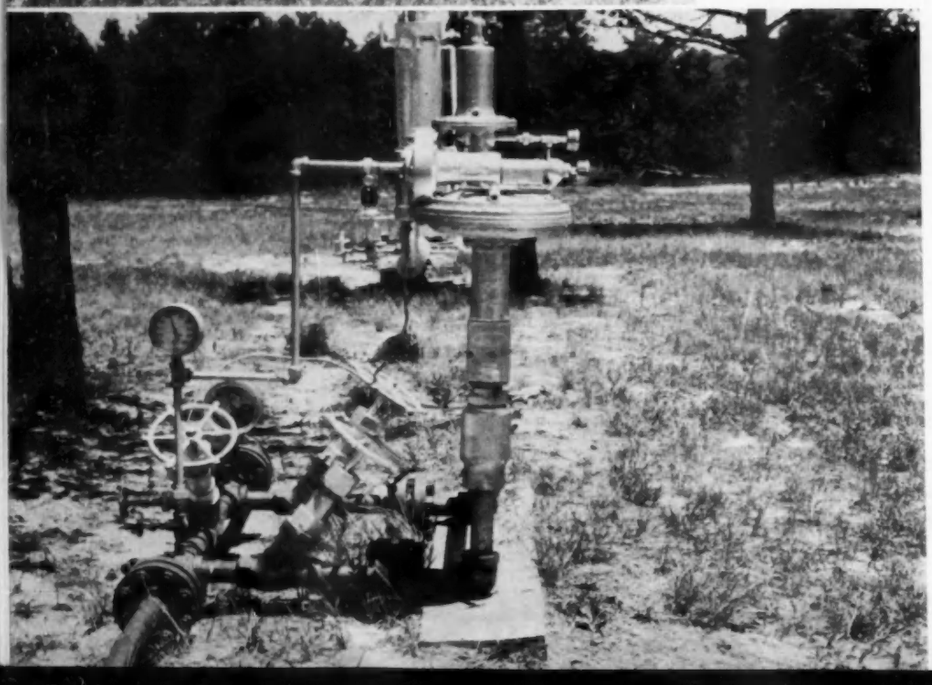
By ELTON STERRETT
Staff Writer



Dual pressure gauges (top) indicate tubing and casing pressures, normally equalized, while fixed choke regulates flow. Quarter-turn plug and master gate provide control of well when closed in.

Vertical heater (left) for restoring to stream heat lost by flow through well-head choke. Horizontal heater handles only actuating stream on pressure regulating unit and is of water-bath type to prevent localized heating and breakdown of contents.

Tied into the main flow line with block gate and by-pass control is a pressure regulator (bottom) which serves to step the well pressure of above 2000 pounds per square inch to the desired 1000-pound maximum for separator influx and for delivery to the gas line.



EQUIPMENT for successfully producing a distillate well is much more complicated than that which will handle, for example, an East Texas field oil producer. Added equipment and more delicate adjustments to maintain the desired pressure, temperature and flow balances impose on the switcher duties which require close supervision, and in consequence the number of such wells which one man can flow is limited both by the attention required and the fact that distillate wells usually are wide-spaced.

One well, for example, producing from the Paluxy in the Chapel Hill field, under proration regulation, can make in excess of 5000 barrels of distillate per month, and furnish upwards of 15,000,000 cubic feet of dry gas.

To secure this flow, the switcher must watch six sets of equipment, each adjustable to deliver required amounts, and each governing its successor and being dependent upon its predecessor in the production line for proper functioning.

The well, flowed normally through tubing, with a pressure in excess of 2000 pounds per square inch, is equipped with a well-head choke, at which point the overall production of the unit is determined. Normal well production is controlled through a quarter-turn, lubricated plug valve, with a wheeled gate as master in the Christmas tree. The choke maintains uniform well-head pressure and volume.

From the choke flow is to a vertical heater, gas-fired, in which the distillate-bearing stream of gas is again brought to an elevated temperature. At the well, before the choke, normal temperature of the stream is around 170° F., dropping to that figure from the producing level high of around 230°. Flow through the choke reduces the temperature to a point close

to the point where freezing of fittings is apt to occur, the flow being warmed to around 130° F. before leaving the heater. A horizontal heater, also gas-fired and consisting of a water-bath through which the fluid tubing is carried, serves to heat the stream which actuates the pressure-maintenance device.

Floating on the line between heater and high-pressure separator is the pressure-maintenance regulator, which cuts the well pressure of above 2000 pounds to the required 1000-pound maximum. Actuated by the specially warmed stream, this equipment is maintained above the point where freezing or retarding of operation might be expected, all adjustments being maintained under cover to prevent possible fouling with sand or other wind-borne trash. High-pressure positive closure gates enable the regulator to be cut off or by-passed if required.

Dual separators are used, the first stage accomplishing the major separation of gas and distillate at the working pressure of the system, 1000 pounds per square inch. From this separator the dry gas is piped to connection with the gas recovery system.

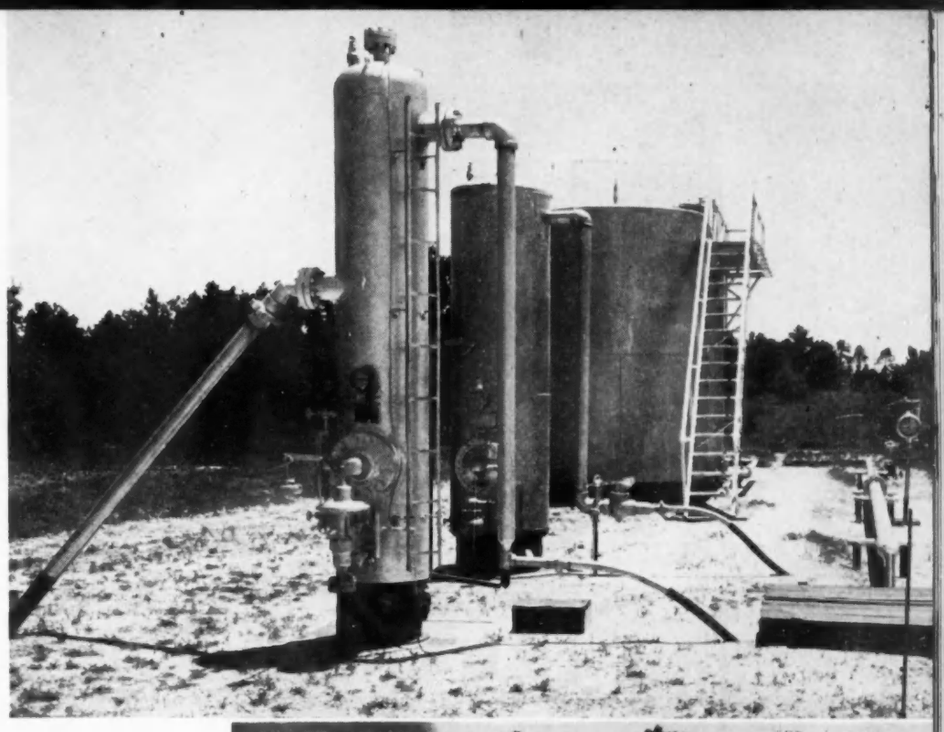
The high-pressure separator is flanked by a low-pressure unit, which takes the fluid discharged by the first and still further clears it of any entrained gas. Working pressure of this unit is 400 pounds per square inch. Dump gas from this unit, being below line pressures, is used for fuel or flared.

Flow of the gas from the lease into the outgoing main is metered with an orifice meter, dual pens recording initial or upstream pressure and the differential drop. Twenty-four-hour charts provide record of volume and pressures.

The outgoing gas stream is protected against possible overpressuring by means of a governor, riding the gas line just beyond the meter run. This unit is set so as to protect the line against surges in excess of nominal line values, venting the entire system to the flare in case well difficulty or derangement of any unit in the pressure regulation equipment permits the delivery pressure to rise a predetermined percentage above nominal 1000-pound delivery value.

Throughout the entire producing system of such a distillate well, visible checks on both pressure and temperature changes is assured through a series of gauges and thermometers.

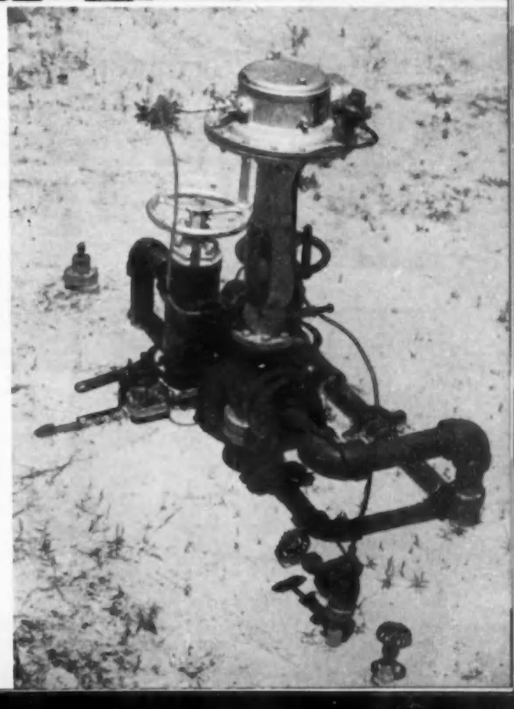
To maintain alignment of the various units, each is mounted on an independent concrete base, and all firmly bolted in place with the exception of the pressure regulator, which is free to move slightly across its base under varying temperature and pressure expansion stresses. In the line between well and heaters, between heater and regulator, and between regulator and high-pressure separator, full loop expansion bends are installed in the flow line, mounted vertically in the plane of the line and free to absorb changes from fixed anchorages down the line in either direction.

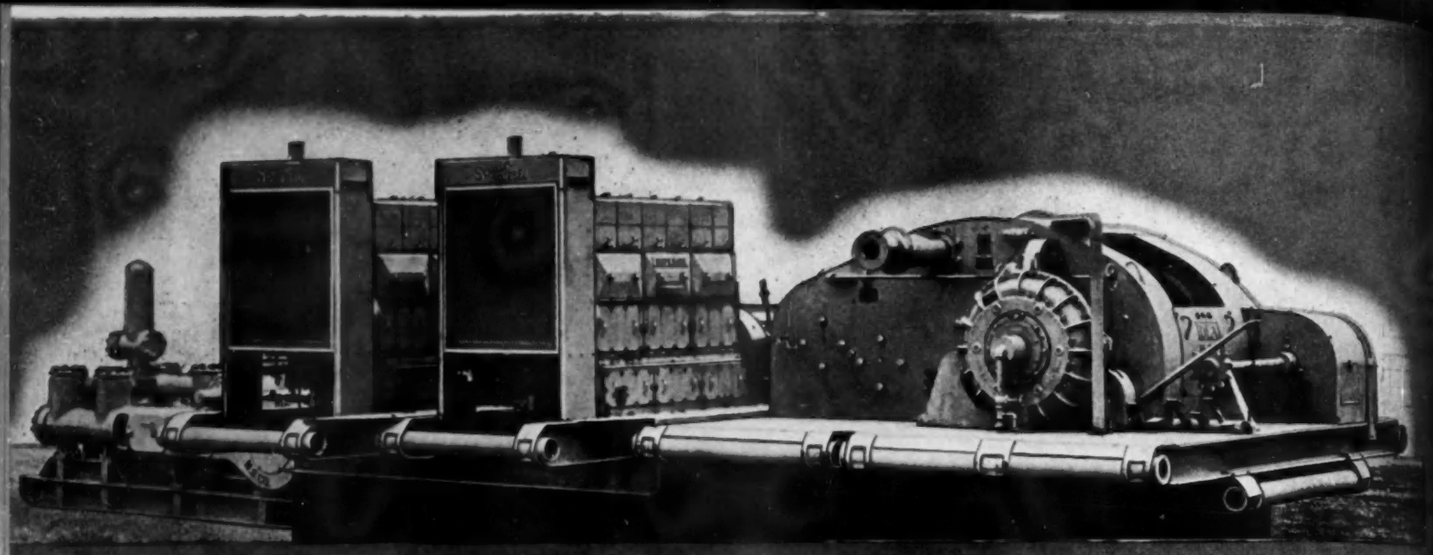


High-pressure separator (above), operating at 1000 pounds, delivers fluid to low-pressure unit with 400-pound maximum, flowing gas directly into meter run for delivery to field mains.

An orifice-type recording meter (right) with 24-hour chart provides check of gas delivery and insures pressure maintenance through visible record of flow head. Individual mounting of recorder on independent base eliminates effect of vibration of the line.

To protect delivery gas line from surges or overpressuring, a governor (below) is installed in the line beyond the meter run. This unit acts to cut out the entire lease in case of overpressuring.





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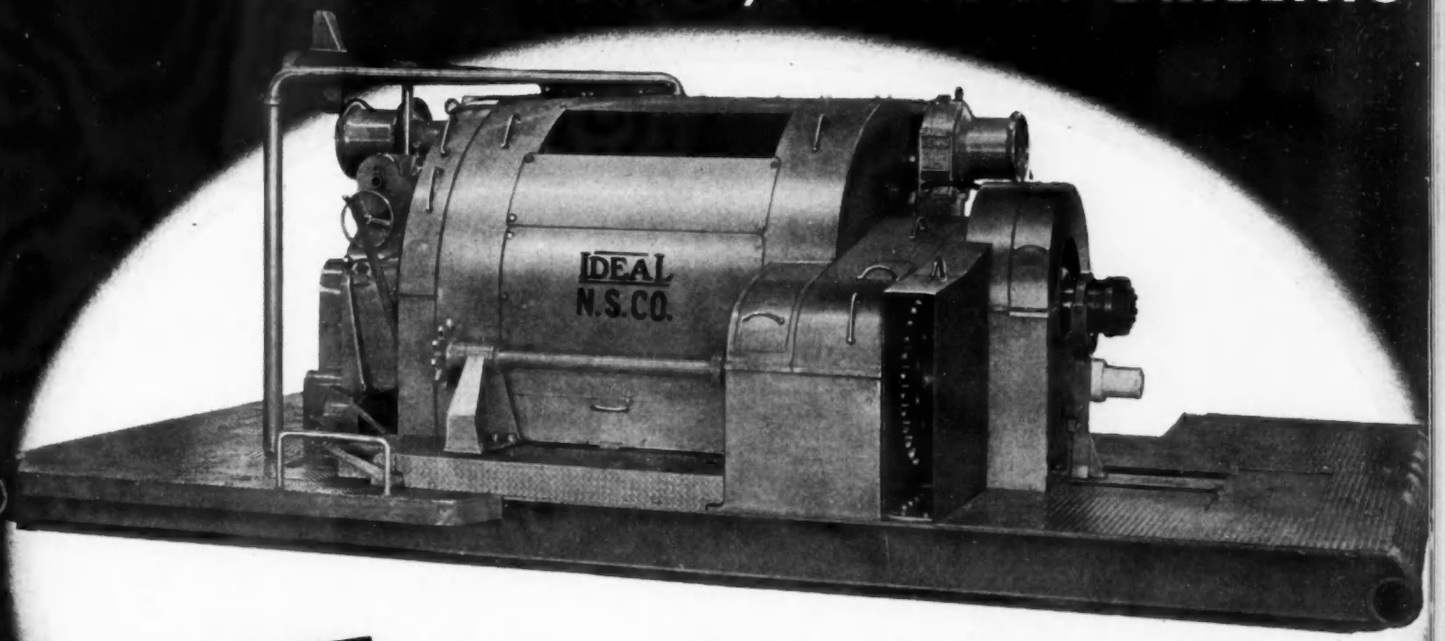

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Carefully matched and with corners bolted for additional strength, this form is carried by winch lines around the pairs of supporting arms and carried over obstructions to the foundation site by two tracks, each equipped with a winch and shear legs.

Portable Concrete Forms Asset When Multiple Foundations Are Poured

LOCATING and levelling forms for concrete bases for heavy engines and pumps must be carefully planned and carried out, if the eventual setting of the power units is to present the mathematically exact line which is evident in the well-planned and set up power plant. With stations depending upon internal-combustion units, the number may amount to a dozen or more, greatly increasing the chance of one form slipping or drifting slightly and thus forcing the corresponding engine base a trifle out of alignment with the others.

When putting down the concrete bases for a battery of 12-600-horsepower 12-cylinder gas engine-compressor units in the Cotton Valley, Louisiana, plant of the Cotton Valley Operators Committee's cycling project,* the contractor used an ingenious method of form support and alignment which resulted in the casting of all bases in a continuous structure with the desired precision.

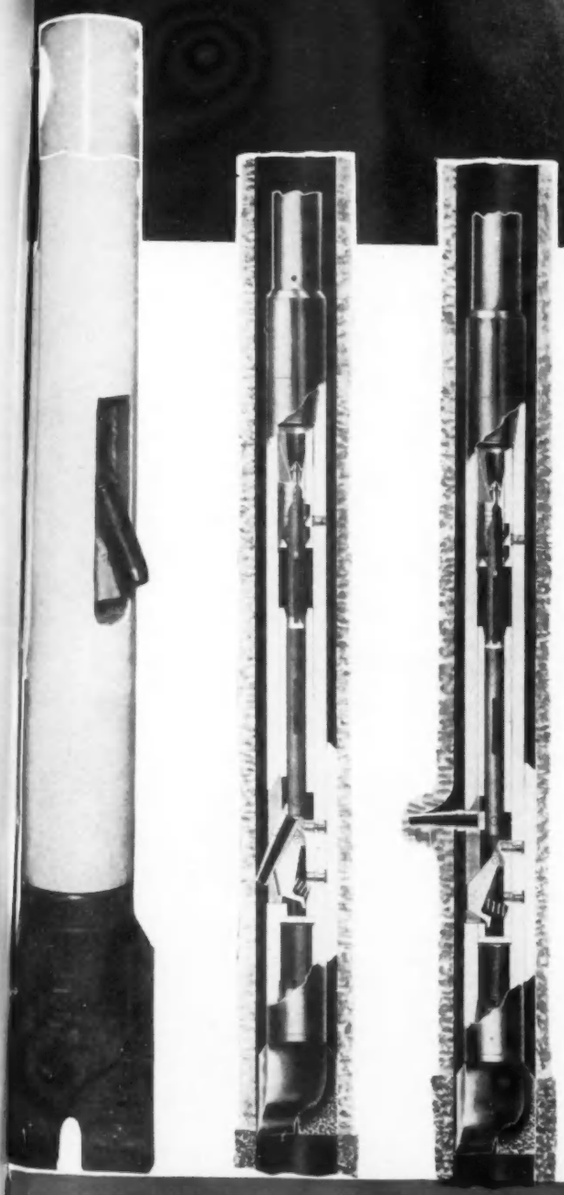
The forms were built up as four separate panels, each composing one side of the completed unit, and fitted together rigidly at the corners with accurate dovetailing to maintain sharp, clear-cut foundation corners. The separate panels, assembled into a form at a site just back of the location of an engine unit, were designed with brackets on alternate vertical braces of the two transverse sides, through which heavy beams were run and securely fastened. These arms or handles extended 5 feet in each direction beyond the corners of the structure.

Foundation pits were dug as a continuous trench, the excavation being carried ahead of the concreting far enough to maintain desired working clearance without exposing the earth berms to erosion or possible caving over a longer period than was necessary. The trench was dug slightly wider than the overall width of the forms, but not wide enough to permit working in the ditch alongside the structure when in place. This added width gave the engine foundations extra lateral support beyond the squared pedestals upon which the units were set, and tied each to its neighbors through the continuous or monolithic footing thus obtained.

Along each of the shoulders of the trench, and three feet from it, heavy levelling sills were half buried in the earth, the sills extending from one end of the foundation line to the other, and being carefully aligned and levelled to afford a continuous bench mark from which to take rough measurements pending check with instruments, and upon which to support all forms for uniform foundation height. After the sills were levelled and firmly braced the surface of the ground back of them was backfilled to the top of the beam to minimize the chance of their being deranged during work around the foundation site.

Two trucks were used to place a form over its corresponding portion of the trench, one being backed as closely as deemed safe to the leveling sill, the other being backed to the completed form. Both winch lines were used, a bight being taken around each pair of arms or handles. By hoisting

* See The Oil Weekly, page 61, July 14, 1941.



The Hunt Side Wall Coring Tool gives you more than just samples. It gives you real cores that can easily and quickly be analyzed by leading laboratories.

This modern, thoroughly proven tool is your short cut to a true and complete picture of your production possibilities. After drilling to a predetermined depth, the well may be electrically logged for all possible producing formations . . . then side wall cored, quickly and at low cost, using the wire line retractable barrel.

The tool is run in the hole on drill pipe. Cores are recovered by means of the retractable wire line barrel and wire line overshot. Any number of cores may be taken, and they range in size up to 1¾" diameter by 8" length. Any type bit desired may be installed on the lower end of the tool for drilling out bridges when necessary. A circulation plug may be dropped into the tool so that circulation can be maintained to the bit whenever desired.

Left: **Showing the tool, with wire line retractable barrel in position to receive the core.**

Center: **Core tube deflected, ready to penetrate side wall to take core.**

Right: **Core tube in side wall after lowering of drill pipe has caused penetration. Drill pipe is now slightly raised, and core recovered by wire line.**

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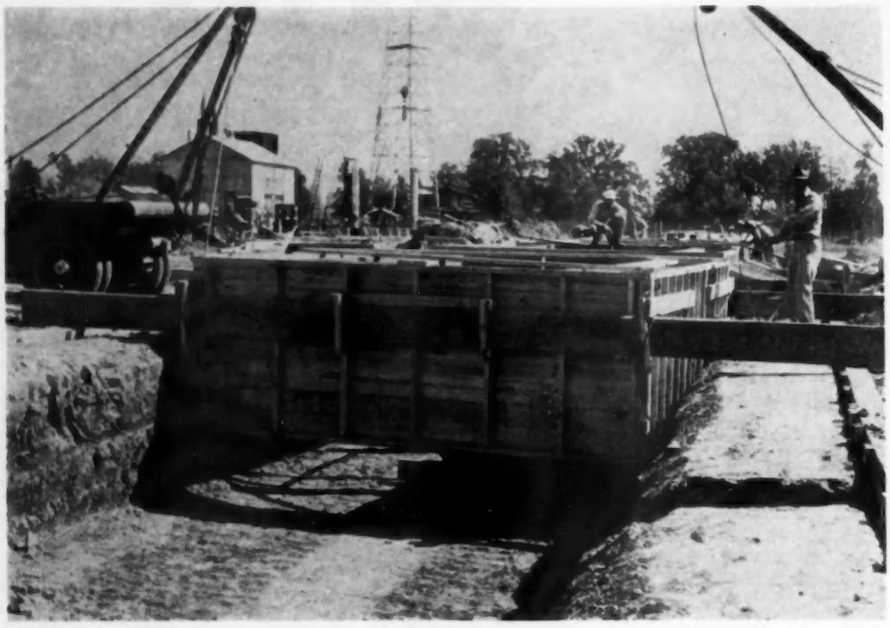


Lowered into place in the wide trench providing a common base for all engine pedestals, the form is supported by the projecting ends of the arms on the two levelling sills, shifted to exact position, and wedged and shored against shifting while the concrete is poured.

with both winches, the form was lifted clear and suspended between the two shears.

Then, as the truck across the trench slowly took up on its winch line, the other truck was backed toward the trench, coming to a halt when it was a slight distance from the leveling sill.

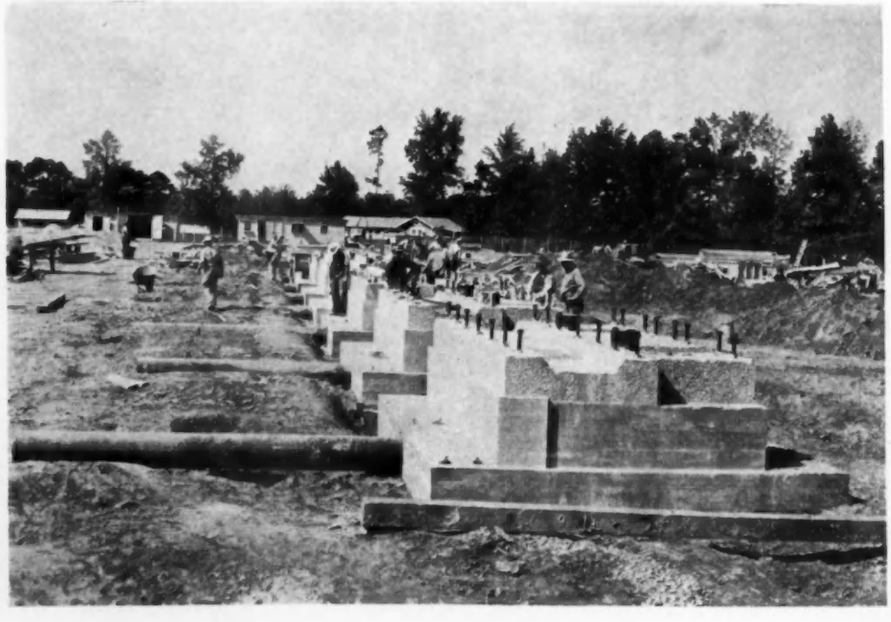
To locate the form, thus suspended, was the work of two men, who were easily able to spot the structure accurately with reference to the sills, and to lower it gradually through the agency of the winches until it had arrived at full support on the four areas of contact between the arms and the sills.

By jacking or barring, the unit could be shifted slightly to secure desired alignment, the weight of the structure being ample to maintain it in position while it was wedged and shored against distortion or possible shifting as the concrete was poured.

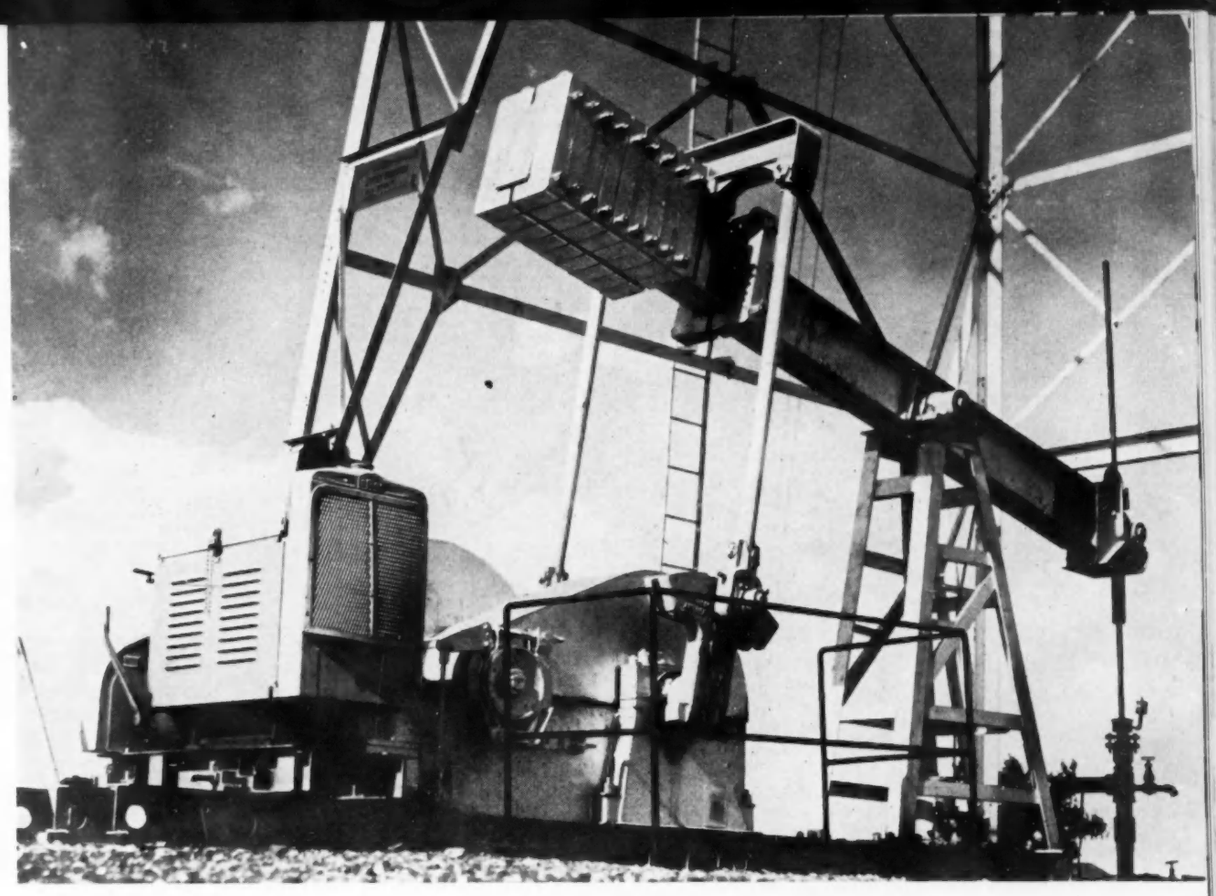
The air inlet for each engine, brought in under the station floor from outside the building, was set into a trench at the proper level before the form was lowered over it, and the inlet thus cast solidly into the middle of the concrete base.

The form, when suspended on the leveling sills by the pair of supporting arms, did not reach to or contact the sides or bottom of the trench, allowing the base to spread below it to the confines of the trench, and eliminating possible misalignment through uneven support. This leaving of space below the bottom of the form permitted each base, as cast, to join to the extended toe left on the preceding foundation, and thus to tie the line of bases into a solid unit.

The foundation bolts for the units were cast directly into the bases, being spotted and held with a timber jig attached across the top of the form and carefully spotted before pouring started.



Some of the engine foundations already cast and from which the forms have been removed for reuse farther down the line. The steel pipe used for the air inlet line beneath the station floor may be seen to the left, with a short stub for connection to the units.



Typical Pumping Well in Chase Pool

Kansas

Development Surges to Record Levels

By FRANK B. TAYLOR
Staff Writer

KANSAS again is establishing a new peak of general activity after a brief duration of somewhat lessened development. Operations and production gained momentum during 1940, and this tempo has been increased through the first half of 1941. New all-time production peaks have been set six times since the first of the year. Pipe lines are being extended to the limit of their carrying capacity. Nineteen new fields have been discovered in the first 7 months of this year. Drilling has increased over the same period of 1940 and in mid-July there were 235 operations in the state, including active and temporarily shut down.

In 1937, the banner year for Kansas, a daily average production peak of 207,125 barrels was established during the week ending July 31. This was exceeded for the first time during the week ended May 5 of this year when production rose to a daily average of 209,100 barrels. Since then successive highs have been set, with July 28 seeing the figure go to a new all-time top of 241,950 barrels.

Pipe-line capacity, variously estimated at between 235,000 and 260,000 barrels, with the Conservation Department favoring a figure of 242,000 barrels as most accurate, is being taxed. This situation, while vital, is not as critical as might first appear when production and pipe-line capacity figures are compared. Considerable Kansas production is being handled by tank truck, by tank cars and by short systems to local consumers. These facilities allow production in excess of apparent pipe-line capacity. However, additional capacity is required and this has resulted in construction of a number of short field lines and some looping of main arteries. Skelly Oil Company has just completed 30 miles of 6-inch from the Bloomer area of Ellsworth County into Russell County. Kaw Pipe Line Company is planning 35 miles of loop from Rice into Barton County. Additional horsepower has been added at some pump stations to increase capacities. Other pipe lines are planned to add further to already existing systems.

Particular consideration is being given facilities which will permit movement of crude oil eastward. Any major transportation medium

New Pools Discovered in Kansas During First 7 Months of 1941

Field and County	COMPANY, WELL AND LOCATION	Date, Month-Day	Producing Formation	Total Depth	Initial Output	Gravity
N. E. Davidson, Russell	Braden & McClure, Phillips 1, C N½ NW SE 34-15-11w	1- 4	Gorham sand	3313	125	....
High Spot, Ellis	Stearns Drlg. Co. et al, Witt 1, C S½ NE SW 28-12-16w	2-12	Lansing-KC	3482	647	36.4
Gibson, Cowley	Sinclair-Prairie Oil Co., Gibson 1, SEc NW 29-34-3e	3- 4	Bartlesville	3378	90	35
Shaeffer, Stafford	Atlantic Refg. Co. et al, Shaeffer 1, C W½ NW SW 3-21-13w	3-19	Arbuckle	3552	1175	30.5
Bowman, Rice	Sharon Drlg. Co. et al, Nevious 1, SWc NE 21-19-10w	3-19	Lansing-KC	3248	530	40.8
West Kraft, Barton	Republic Natural Gas Co., Radenberg 1, CW½ NW SE 8-17-11w	3-26	Arbuckle	3332	68	39.5
Macksville, Stafford	Stanolind O. & G. Co., Nagel 1, C E½ NE SW 3-24-15w	4- 3	Lansing-KC	3828	271	29
S. W. Catherine, Ellis	Derby Oil Co. et al, Miller 1, C S½ SW SW 17-13-17w	4- 3	Arbuckle	3653	185	30.5
Unnamed, Rice	Derby Oil Co. et al, Dick 1, C W½ SW NE 21-20-9w	4- 3	Arbuckle	3272	454	....
East Frog Hallow, Cowley	Tulsa Oil Corp. et al, Miller 1, SW SE NE 15-32-5e	4-19	Bartlesville	3105	40	42
N. W. Ainsworth, Barton	Continental Oil Co., Stoskopf 1, SE NW SW 28-16-13w	5- 3	Arbuckle	3403	539	35
S. E. Eberhart, Barton	Vickers Pet. Co., Kerr 1, C N½ NW SE 24-19-11w	6-14	Arbuckle	3325	2864	....
Unnamed, Russell	Shell Oil Co., Ruby 1, NWc NE 36-14-13w	6- 4	Lansing	2901	2946	....
N. W. Greenvale, Russell	The Texas Co., Borrell 1, C N½ NE SE 32-14-12w	5- 3	Arbuckle	3171	464	....
Unnamed, Greenwood	McPherson Drlg. Co., Batesman 1-A, SE SW NW 24-28-11e	6-25	Kansas City	1210	15	....
Unnamed, Phillips	H. L. Wirick, Friebus 1, C W½ SW NW 32-2-19w	7- 1	Lansing	3250	328	35.8
Rusch, Russell	Westgate-Greenland et al, Rusch 1, C E½ SE NE 29-14-14w	6-14	Arbuckle	3223	3000	....
Ahnert, Stafford	Stanolind O. & G. Co., Ahnert 1, C E½ NE SE 26-22-13w	7- 9	Arbuckle	3761	1440	28
Peace Creek, Reno	Simpson Oil Co. et al, Snowbarger 1, SW SE NE 21-23-10w	7-30	Viola	3789	3000	41.5

from a possible point of origin in Texas through the Mid-Continent to the east would have Kansas as an important point of supply on the northwest shoulder of such a system. Also, with Illinois incapable of producing the volumes of two years ago, a greater normal demand is placed against Kansas fields. In fact, this is one major reason for the Kansas upswing that has prevailed through the past 18 months.

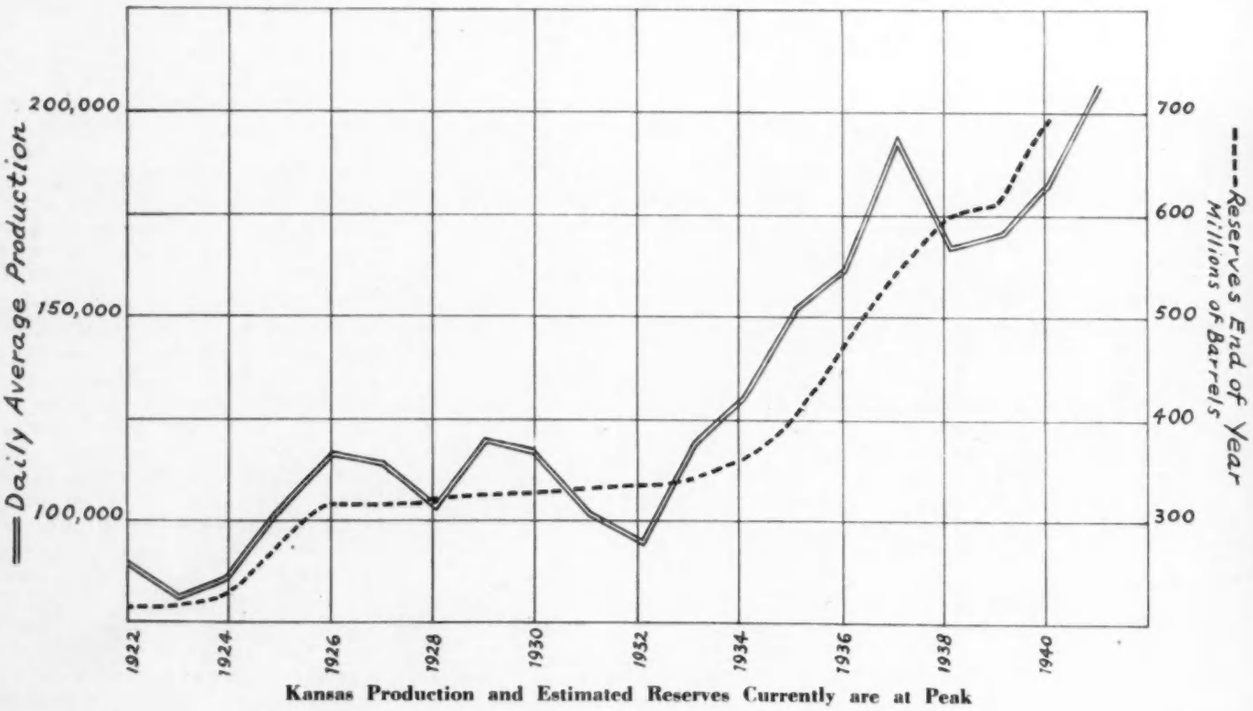
Paralleling the increase in daily production, potentials in the state reached a new high of 7,696,591 barrels in July. Disregarding the relationship between the potential and production, the trend of the state's productivity as a whole is obtained by a comparison of present and past total potentials. This analysis shows a steady increase, particularly marked since 1938.

Trend of State Potentials, Prorated Pools, by Years

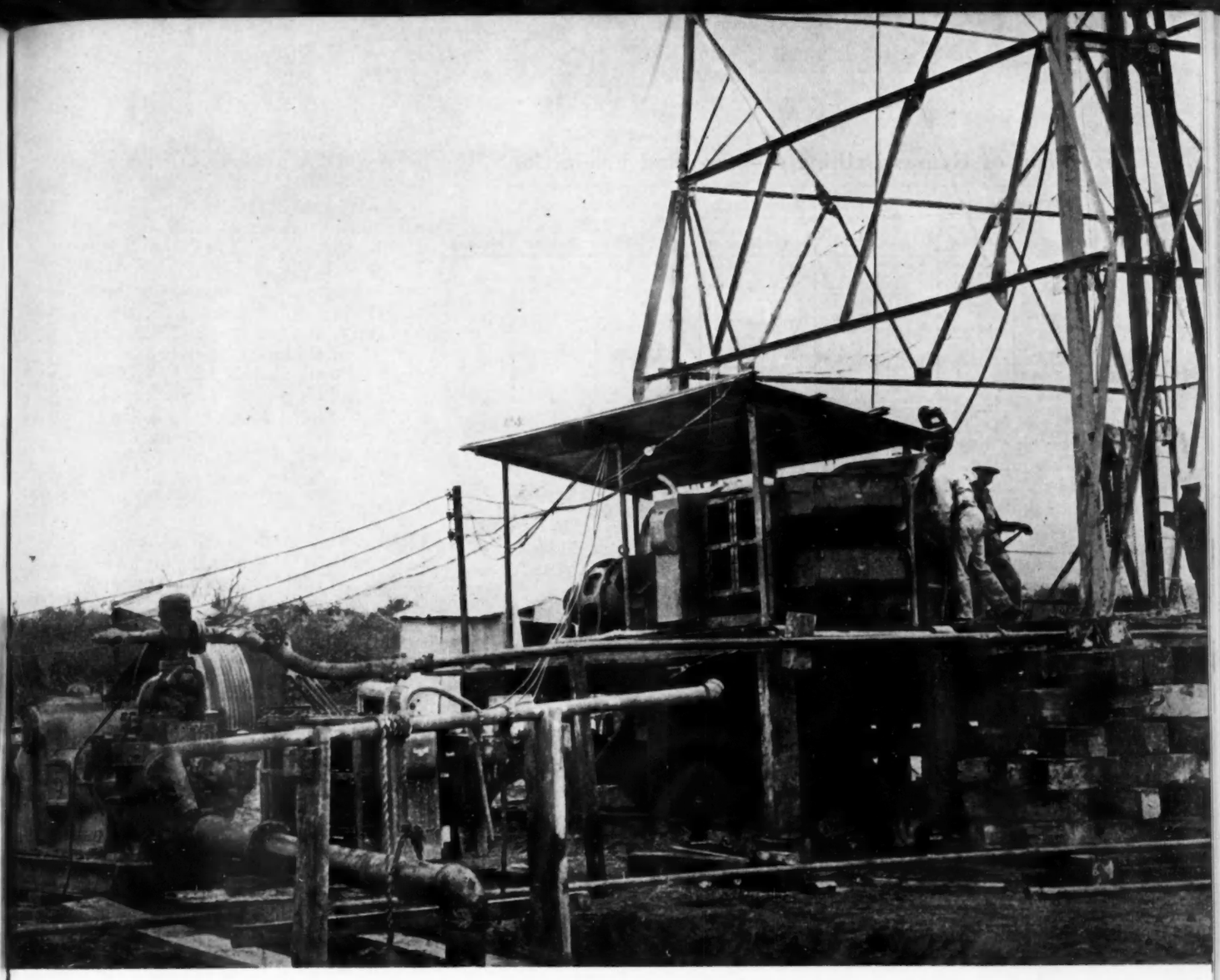
1933	288,957
1934	367,038
1935	838,005
1936	1,485,141
1937	3,062,233
1938	3,651,120
1939	4,641,594
1940	6,061,430
1941 (July)	7,696,591

Despite increased potential and finding of new fields, it has been possible to gradually increase production from prorated wells. This basic production figure was on a constant, down-hill trend until April of 1940 when it reached a low of 18,875 barrels daily. This restricted figure was not conducive to expanded development and the area consequently witnessed a drop in drilling. This was evidenced in a survey made in 1939 which shows a 39 percent drop in total completions for the first five months of that year as compared with the first five months of the previous year.

The reversal of the average daily allowable per prorated well has established an up-trend that now allows an operator to produce an average of 26.7 barrels daily, an increase of 71 percent over the minimum daily allowable. This has also been accomplished in the face of additional connections to 16 fields with no previous pipe-line connections and only irregular outlet facilities. All Kansas prorated pools now are either con-

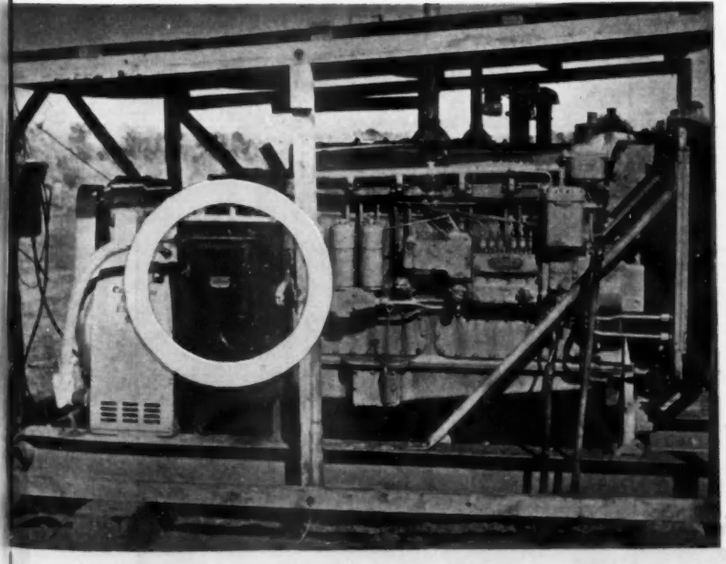


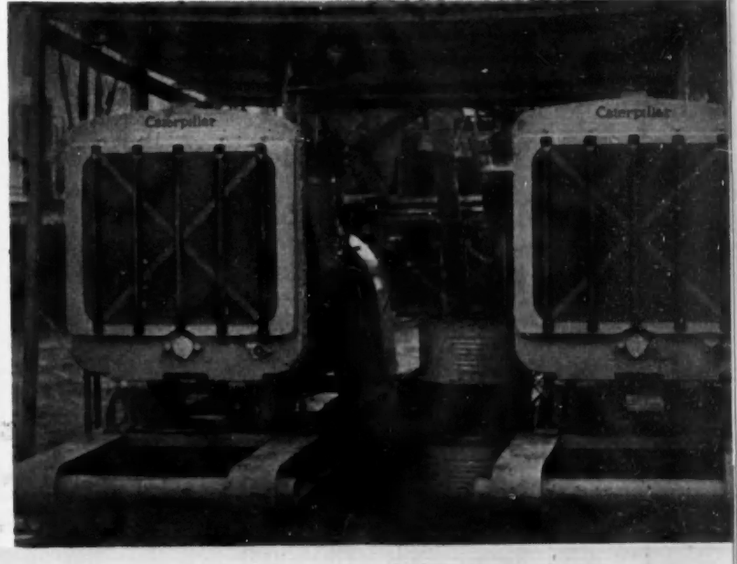
Kansas Production and Estimated Reserves Currently are at Peak



The only electrical equipment needed with the self-regulating "Caterpillar" Diesel Electric Sets is a switch box — in this installation mounted on the side of the set. Set can be unrigged by merely disconnecting three wires.

Two "Caterpillar" Diesel Electric Sets, of 66 kilowatts capacity (continuous rating), operate this rig suitable for 4000-ft. drilling—using a 125-horsepower electric motor on the draw works and a 150-horsepower electric motor on a 6¾ x 14 mud pump.





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Trend of Kansas Drilling, Footage and Production

Year	FOOTAGE DRILLED			WELLS COMPLETED			CRUDE PRODUCTION		
	U. S.	Kansas	Kansas Percent	U. S.	Kansas	Kansas Percent	U. S.	Kansas	Kansas Percent
1935..	64,112,400	4,044,907	6.3	22,669	1,314	5.8	996,596,000	54,843,000	5.5
1936..	77,071,920	5,442,549	7.0	26,935	1,772	6.4	1,099,687,000	58,317,000	5.3
1937..	99,922,908	8,327,976	8.2	33,112	2,657	8.0	1,279,160,000	70,761,000	5.3
1938..	87,497,152	5,299,000	6.1	28,272	1,642	5.8	1,214,355,000	60,064,000	4.9
1939..	83,855,064	4,503,802	5.4	27,565	1,450	5.3	1,264,256,000	60,723,000	4.8
1940..	93,937,717	6,310,656	6.7	30,560	2,007	6.6	1,350,735,000	66,260,000	5.0
1941.. (First Half)	43,246,211	3,123,084	7.2	14,425	1,046	7.2	667,290,000	37,365,000	5.4

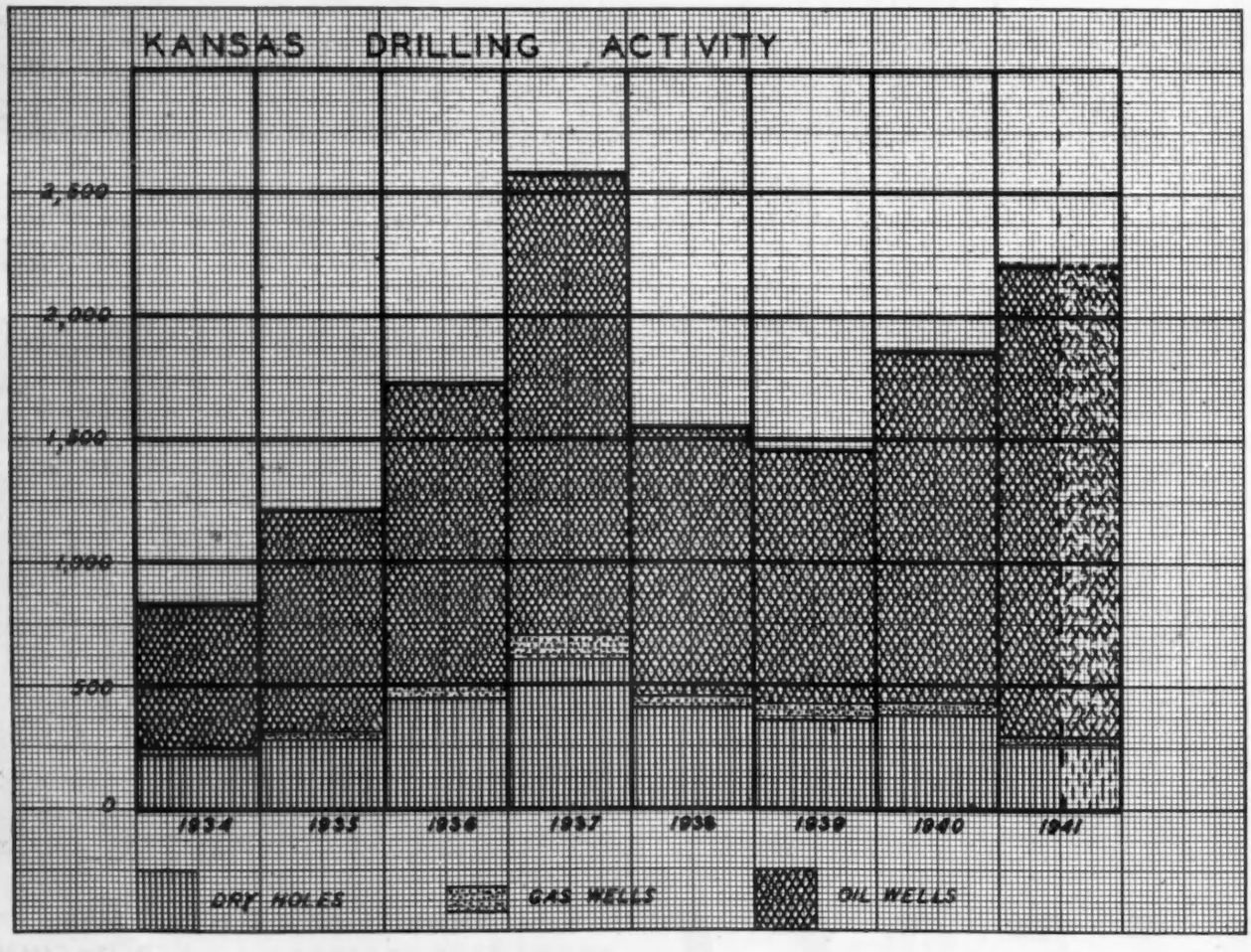
nected to pipe line or have other dependable outlet.

Spacing regulations have been varied to meet certain reservoir conditions, and this has been of assistance in alleviating the seriously low well allowables. Fewer wells have been demanded in some areas while in others the effect has been to promote drilling on wide spacing with a reasonable expectation of a profit from poor reserves while no profit could have been obtained if drilling was forced on minimum spacing. Thirteen-, 20- and 40-acre spacing has been approved in certain instances. A majority of fields are being developed on a combination of 10- and 20-acre spacing with older parts of the fields being divided into 10-acre tracts and the newer and edge areas into 20-acre drilling units. Some fields, more or less recently discovered, are being drilled solely on a 20-acre basis, Bornholdt being an important example.

Drilling has stepped up during the past 18 months with every indication being that completions will establish a high only exceeded by the 1937 peak of 2657 wells. During the first half of this year operators completed 1046 wells compared with 892 during the corresponding period of 1940. This represents an increase of 17.3 percent. Well completions in Kansas represent 7.2 percent of the total for the United States.

Footage drilled in Kansas is essentially constant with depth. Unlike the majority of oil-producing provinces, there is relatively little chance of finding production at greater depths in case the normal section is barren. There is only one field in the state in which production is obtained below 6000 feet, this being the Morrison pool, Clark County, where Viola lime produces from one well at 6455 feet. Arbuckle lime, which is the chief producing horizon of the state, is also the deepest stratum normally productive. In a few cases production has been obtained subjacent to Arbuckle (Ordovician) lime from Basal sand, Reagan sand or Granite wash. Where Arbuckle is penetrated the basement complex is usually encountered.

With other producing formations above Arbuckle which occurs generally at 5000 feet or less, the average well depth is limited and fluctuates with current development of more shallow field. During the past seven years the maximum average depth variation has been



With FRICK-REID There Will Never Be a Seller's Market

Indifference to the needs of any customer is an attitude we never expect to assume. Priorities and material shortages are but temporary handicaps to a supply service that began in the early days of the petroleum industry and will go on down the years. With Frick-Reid there will never be a seller's market.

Nor will Frick-Reid inventories in 75 stores cease to justify the confidence of men engaged in one of the most essential of all defense industries. Not if eternal vigilance and close affiliation with material sources will make it so.

Frick-Reid Will Carry On!

"...here's MY warehouse!"

FRICK-REID *Supply Corporation*

TULSA, OKLAHOMA

Tabulated History of Western Kansas Development Data by Fields

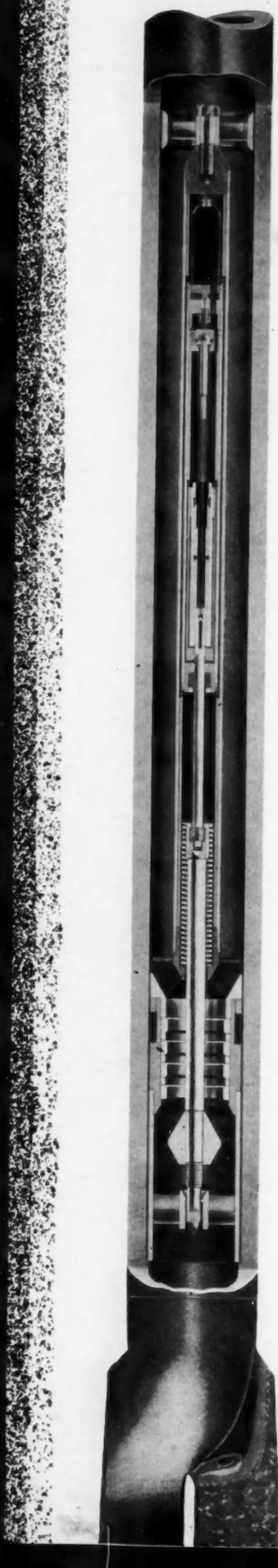
FIELD AND COUNTY	Location	Discovery Date	No. Oil Wells	Productive Acres	Per-Well Spacing Acres	Important Producing Strata	Average Depth Deepest Pay	Gravity A.P.I.	Rigs Active 7-20-41	Outlet	Daily Allowable 7-1-41	Accumulated Production to 6-1-41	No. Operators
Abbyville, Reno	24-8w	1—27	4	120	10, 20	K.C.-Lansing	3544	37	1	Pipe line	75	382,893	2
Ainsworth, Barton	16-13w	12—36	59	1,250	10, 20	Topeka, Arbuckle	3405	35	1	Pipe line	1,201	1,832,045	12
Albert, Barton	18-15w	7—35	14	390	10, 20	Reagan	3585	35	2	Railroad	330	584,152	4
Aldrich, Ness	19-20w	11—29	13	450	10, 20	Miss. Lime	4335	33	....	Truck	308	286,764	3
Anness, Sumner	30-4w	10—37	1	40	10	Wilcox	4407	43	....	Railroad	22	39,537	1
Atherton, Russell	13-14w	7—35	37	940	10, 20	K.C.-Lansing, Oswald, Arbuckle Lime	3190	31, 40	1	Pipe line	722	982,239	10
Augusta, Butler	27 & 28-4e	1—14	231	4,600	10, 20	K.C.-Lansing, Arbuckle, Wilcox	2600	34, 36	3	Pipe line	*	61,959,420	23
Beaver, Barton	16-12w	12—34	27	620	10, 20	Topeka, Arbuckle	3350	38	2	Pipe line	678	1,124,299	9
Bedford, Stafford	23-12w	8—28	9	220	20	Arbuckle	3850	35	2	Pipe line	479	53,973	3
Bemis, Ellis	11 & 12-17w	10—35	359	5,950	10, 20	Topeka, Simpson, Arbuckle	3380	29, 35	7	Pipe line	10,241	13,206,286	25
Big Creek, Russell	14-15w	7—35	63	960	10, 20	Arbuckle, Gorham, K. C.-Lansing	3250	35, 37	6	Pipe line, Truck	1,552	1,746,559	19
Bloomer, Barton	17-10 & 11w	2—36	207	3,600	10, 20	Arbuckle, Cong., K.C.-Lansing	3280	41, 44	2	Pipe line	5,803	7,478,263	21
Blue Hill, Ellis	12-16w	6—37	18	380	10, 20	Arbuckle, K.C.-Lansing, Topeka	3354	30, 32	....	Pipe line	565	249,642	4
Bornholdt, Rice & McPherson	20-5w	8—37	150	4,200	20	Miss. Chat	3340	32	....	Pipe line	5,071	1,569,658	16
Bow Creek, Phillips	5-18w	5—39	1	40	10	K.C.-Lansing	3162	40	....	Pipe line	24	13,824	1
Bowman, Rice	19-10w	8—36	2	60	20	K.C.-Lansing	3060	40	....	Pipe line	44	1,968	1
Brandenstein, Rice	19-10w	11—33	2	60	20	K.C.-Lansing	3040	44	....	Pipe line	39	365,310	1
Brandt, Butler	28-7e	6—36	39	680	10, 20	Miss. Lime	2685	43	....	Pipe line	742	504,333	5
Bredfeldt, West, Rice	18-10w	5—37	2	60	10	Arbuckle	3260	43	....	Truck	42	20,059	2
Bradford, Ellsworth	17-10w	9—32	26	490	10, 20	Arbuckle, K.C.-Lansing	3340	45	....	Pipe line	657	1,105,656	5
Buhler, Reno	22-5w	4—38	10	220	10	Simpson	3910	40	....	Pipe line	187	321,345	4
Burnett, Ellis	10 & 11-17w	10—37	179	2,950	10, 20	Arbuckle, K.C.-Lansing	3390	36	9	Pipe line	9,871	3,232,636	13
Burrton, Reno	23-4w	4—31	418	7,600	10, 20, 40	Arbuckle, Hunton, Miss. Chat	3775	37, 42	....	Pipe line	7,265	31,610,147	53
Cario, Pratt	28-11w	12—39	4	260	40	Viola	4245	36	1	Pipe line	96	21,160	1
Campbell, Rice	19-9w	1—38	25	410	10, 20	Arbuckle, K.C.-Lansing	3225	38, 44	....	Pipe line, truck	712	780,254	8
Cawton, North, McPherson	13-1w	7—36	2	60	10	Miss. Chat	2832	35	....	Pipe line	39	61,533	2
Catherine, Ellis	13-17w	6—36	1	40	20	Arbuckle	3653	29	1	Pipe line	25	894	1
Chase, Rice	19-9w	12—32	237	3,800	10, 20	Arbuckle, K.C.-Lansing	3261	43, 45	5	Pipe line, truck	5,339	21,154,617	31
Chinberg, McPherson	19-3w	10—29	30	400	10	Miss. Chat., K.C.-Lansing	3010	42	....	Pipe line	*	1,267,768	8
Coralena, Russell	15-13w	10—36	102	2,120	10, 20	Arbuckle, Dodge, K.C.-Lansing	3174	38	9	Pipe line	2,837	(Combined with Trapp)	14
Couch, Cowley	30-5e	5—37	15	230	20	Bartlesville	2855	38	1	Pipe line	394	101,856	2
Cramm, Rice	19-9w	9—37	4	140	10	K.C.-Lansing	3107	36	....	Pipe line	92	(Combined with Chase)	3
Cunningham, Kingman-Pratt	27-10w	1—31	61	660	10, 20	K.C.-Lansing, Viola	4260	36	2	Pipe line	1,356	2,484,847	3
Darien, Cowley	30-4e	7—39	5	180	10, 20	Arbuckle	3286	37	....	Pipe line	138	82,412	3
Davidson, Barton	16-11w	3—30	2	70	20	K.C.-Lansing	3300	38	3	Pipe line	50	13,983	2
Donovan, Russell	15-15w	2—35	1	40	20	K.C.-Lansing	3242	38	1	Pipe line	51	34,553	1
Dopita, Rooks	8-17w	7—34	7	300	40	Arbuckle, K.C.-Lansing	3440	25, 36	....	Truck	146	126,553	2
Doran, Rice	19-10w	10—36	3	120	10, 20	Arbuckle	3290	44	....	Pipe line	80	112,360	3
Drach, Stafford	22-13w	11—37	12	260	10, 20	Arbuckle	3755	41	....	Pipe line	282	243,382	2
Driscoll, Russell	15-11w	7—40	2	80	20	Arbuckle, Gorham	3260	37	....	Truck	50	6,993	2
Dubuque, Russell	15-12w	10—35	4	160	10, 20	Arbuckle, K.C.-Lansing	3335	38	2	Pipe line	79	156,072	3
Eberhardt, Russell	19-11w	6—35	5	240	10, 20	Arbuckle	3327	39	1	Pipe line	126	162,520	4
Edwards, Rice	18-8w	3—36	84	1,180	10, 20	Arbuckle	3220	40	....	Pipe line	2,384	2,418,764	6
Eichman, Russell	16-13w	4—35	6	240	10	Arbuckle	3335	38	....	Pipe line	91	630,894	2
Ellinwood, North, Barton	19-11w	6—37	1	40	10	Arbuckle	3350	41	....	Pipe line	17	41,043	1
Eldorado, Butler	25 & 26-4 & 5e	1—17	1,628	18,250	10	Arbuckle, Simpson, K. C.-Lansing, Viola	2550	34	2	Pipe line	*	178,276,340	..
Emmerman, Ellis	13-10w	6—37	3	100	20	Topeka	3250	33	....	Pipe line	73	43,146	1
Fairfield, Russell	15-13w	12—38	9	340	20	Arbuckle, K.C.-Lansing	3335	37	....	Pipe line	244	121,146	4
Fairport, Russell & Ellis	11 & 12-15w	11—23	183	2,240	10, 20	Arbuckle, K.C.-Lansing, Topeka, Wilcox	3210	38 to 42	2	Pipe line	*	14,688,285	23
Feist, Barton	18-11w	12—35	1	40	10	Arbuckle	3342	40	....	Truck	17	48,158	1
Feltes, Barton	16-12w	10—39	10	320	20	Arbuckle	3355	42	1	Pipe line	531	109,546	3
Fischer, Stafford	21-12w	5—38	5	180	10, 20	Arbuckle	3664	37	....	Pipe line	111	90,008	3
Frog Hollow, Cowley	32-5e	1—37	29	590	10, 20	Bartlesville, Burgess	3055	41	2	Pipe line	669	542,814	6
Gates, Stafford	21-13w	5—33	11	280	10, 20	Arbuckle	3650	38	....	Pipe line	306	620,113	2
Geneseo, Rice	18-6w	5—34	182	2,600	10, 20	Arbuckle, Simpson	3245	39	2	Pipe line	5,408	5,746,541	7
Gibson, Cowley	34-3e	2—41	1	40	10	Bartlesville	3378	35	2	Pipe line	19	1,593	1
Goodrich, Sedgwick	25-1e	1—29	32	550	10, 20	Arbuckle	3335	39	....	Pipe line	726	2,749,202	6
Gorham, Russell	13 & 14-15w	10—26	304	4,800	10, 20	Arbuckle, K. C.-Lansing, Tarkio, Topeka, Gorham	3300	32 to 38	1	Pipe line	6,886	17,926,040	28
Graber, McPherson	21-1w	5—34	128	1,400	10, 20	Hunton, Misener, Wilcox	3345	41	....	Pipe line	2,680	5,388,703	7
Greenvale, Russell	16-12w	4—38	21	480	10, 20	Arbuckle, Gorham, Howard, K.C.-Lansing	3210	38	6	Pipe line	230	214,986	8
Greenwich, Sedgwick	26-2e	.....	43	800	10, 20	Viola	3160	37	....	Pipe line	715	9,167,607	3
Guldner, Rice	18-9w	7—35	7	140	10	Arbuckle, K.C.-Lansing	3225	45	....	Pipe line	*	242,346	4
Hafferman, Rice	19-9w	8—36	10	290	10, 20	Arbuckle	3255	47	1	Pipe line	254	452,314	3
Hagan, Barton	20-11w	1—39	2	100	10, 20	Arbuckle	3330	40	....	Pipe line	46	20,634	2
Hall-Gurney, Russell	13 & 14-14w	2—33	375	6,200	10, 20	Arbuckle, Gorham, K. C.-Lansing, Tarkio, Topeka, Pre-Camb.	3105	34 to 40	10	Pipe line	10,217	7,224,538	36
Halstead, Harvey	22 & 23-3w	8—28	20	740	10, 20, 40	Miss. Chat	2990	35	....	Pipe line	356	1,226,855	5
Hammer, Barton	19-12w	8—40	1	40	20	Arbuckle	3370	41	....	Truck	25	5,875	1
Heiken, Ellsworth	17-10w	10—30	7	200	10	Arbuckle	3270	44	....	Pipe line	*	28,910	3
Heins, Rice	18-10w	7—38	1	40	10	Arbuckle	3267	40	....	Pipe line	23	10,271	1
Henne, McPherson	17-1w	11—40	2	60	10	Miss. Chat	2660	36	1	Pipe line, Truck	41	5,460	2
Hersog (Hartsook), Ellis	13-16w	7—40	3	120	20	Arbuckle	3470	37	....	Pipe line	120	21,243	2
Hesston, Harvey	22-1w	9—34	1	40	20	Misener	3294	39	....	Pipe line	23	24,993	1
High Spot, Ellis	12-16w	2—40	1	40	20	K.C.-Lansing	3626	36	....	Pipe line	24	590	1
Hilger, Reno	26-4w	4—34	32	600	10	Viola	4055	38	....	Pipe line	716	1,874,941	4
Hiss, Barton	2-13w	5—36	5	200	10, 20	K.C.-Lansing	3270	36	....	Pipe line	130	259,861	3
Hittle, Cowley	13-4e	4—27	69	850	10	Arbuckle, K.C.-Lansing	3360	39	....	Pipe line	2,547	2,922,900	9
Hoffman, Barton	16-11w	5—40	5	160	20	Arbuckle	3335	40	2	Pipe line	162	25,856	2
Hoisington, Barton	17-13w	1—38	3	120	20	Arbuckle, K.C.-Lansing	3490	36 & 38	....	Pipe line	75	67,064	2
Hollow-Nikkel, Harvey	22-3w	12—31	175	2,100	10, 20	Arbuckle, Miss. Chat., K.C.-Lansing, Wilcox	3500	43	....	Pipe line	*	18,481,590	16
Iuka, Pratt	27-13w	8—37	6	190	20	Arbuckle, Simpson	4350	38	1	Truck	152	99,199	3
Johnson, McPherson	20-3w	2—32	15	420	10, 20	Miss. Chat	3050	37	....	Pipe line	231	2,573,654	4

Tabulated History of Western Kansas Development Data by Fields—Continued

FIELD AND COUNTY	Location	Discovery Date	No. Oil Wells	Productive Acres	Per-Well Spacing Acres	Important Producing Strata	Average Depth Deepest Pay	Gravity A.P.I.	Rigs Active 7-20-41	Outlet	Daily Allowable 7-1-41	Accumulated Production to 6-1-41	No. Operators
Jordan, Stafford	25-14w	1—37	7	150	10, 20	K.C.-Lansing	3840	37	1	Truck	264	191,748	1
Karber, Rice	19-10w	10—40	3	130	20	Arbuckle	3350	34	....	Pipe line	72	12,553	2
Karst, Russell	15-14w	10—35	4	150	10, 20	Arbuckle	3325	36	....	Pipe line	71	184,011	2
Keesling, Rice	20-9w	8—35	68	1,050	10, 20	Arbuckle	3220	42	2	Pipe line	1,505	2,865,495	18
Keighley, Butler	27-7e	5—37	1	40	20	Simpson	3158	39	....	Pipe line	22	.....	1
Kipp, Stafford	25-14w	1—37	4	160	20	K.C.-Lansing	3910	34	....	Truck	150	98,216	1
Koblitz, Ellis	12-18w	2—37	7	210	10, 20	Arbuckle	3690	26	1	Pipe line	179	80,747	3
Kraft, Barton	17-11w	3—37	75	1,100	10, 20	Arbuckle, K.C.-Lansing	3400	39, 44	6	Pipe line	2,078	1,180,980	16
Krier, Barton	16-11w	10—39	17	480	20	Arbuckle, Gorham, K. C.-Lansing, Topeka	3325	36, 43	1	Pipe line	397	128,579	7
Lake City, Barber	21-3w	7—37	1	40	20	Arbuckle	4610	43	....	Railroad	40	48,737	1
Lanterman, Barton	18-11w	1—35	7	220	10, 20	Arbuckle, K.C.-Lansing	3330	42	1	Pipe line	180	230,624	4
Laton, Rooks	9-16w	8—27	59	900	10, 20	K.C.-Lansing	3210	40	9	Pipe line	1,264	741,252	11
Latta, Sumner	30-2w	6—27	14	450	10	K.C.-Lansing	3225	40	....	Railroad	312	69,801	2
Leesburgh, Stafford	33-13w	4—38	9	280	10, 20	Arbuckle	4165	36	....	Pipe line	378	201,490	1
Lerado, Reno	26-9w	10—35	33	650	10	K.C.-Lansing, Viola	4130	36, 40	....	Pipe line	739	2,194,743	3
Linsborg, McPherson	17-2w	1—38	2	80	20	Viola	3375	35	....	Truck	47	54,042	1
Lorraine, Ellsworth	17-9w	11—34	85	1,400	10, 20	Arbuckle, K.C.-Lansing	3155	46	....	Pipe line	1,343	8,011,397	8
Lost Springs, Marion	17-4e	9—27	94	1,780	10, 20	Miss. Chat	2385	37	....	Pipe line	1,689	2,902,500	17
Lyons, Rice	20-8w	11—39	1	40	20	Wilcox	3283	37	....	Truck	11	8,939	1
Macksville, Stafford	24-15w	4—41	1	40	20	K.C.-Lansing	3839	29	1	Pipe line	23	651	1
Mahoney, Russell	14-12w	7—40	3	110	20	K.C.-Lansing	2985	42	....	Pipe line	73	14,243	2
Marchand, West, Barton	20-12w	5—39	8	260	10, 20	Arbuckle	3360	40	....	Pipe line, truck	229	(Combined with Silica)	3
Marshall, Ellis	11-18w	11—36	21	480	10, 20	Arbuckle	3650	29	1	Pipe line	559	536,603	6
Max, Stafford	21-12w	8—38	5	320	10, 20	Arbuckle, K.C.-Lansing	3575	40	3	Pipe line	173	70,690	4
Medicine Lodge, Barber	33-13w	3—37	1	40	20	Misener	4851	34	....	Railroad	.....	45,052	1
Morel, Graham	8-12w	4—38	6	240	10, 20	Arbuckle	3715	28	....	Truck	350	152,796	1
Mueller, Stafford	21-12w	8—37	2	60	10	Arbuckle	3605	40	....	Pipe line, truck	38	93,713	2
Neidenthal, Russell	14-15w	9—34	1	40	10	Arbuckle, K.C.-Lansing	3027	35, 40	....	Pipe line	20	54,718	2
Nunn, Finney	21-34w	6—38	2	60	20	Miss. Lime	4645	32	....	Truck	56	99,711	1
Orth, Rice	18-10w	7—32	14	360	10, 20	Arbuckle, K.C.-Lansing	3200	45	....	Pipe line	276	705,004	7
Otis, Rush	18-16w	12—35	17	600	10, 20, 40	Reagan	3555	33	....	Railroad	628	1,434,491	3
Pawnee Rock, Pawnee	20-16w	9—36	14	320	10, 20	Arbuckle	3810	36	6	Truck	389	174,909	6
Penny Wann, Ellis	15-20w	9—36	1	40	10	Basal Sd	3658	33	....	Truck	20	28,845	1
Ploog, Rice	18-9w	7—30	10	220	10, 20	Arbuckle	3265	47	....	Pipe line	211	1,196,258	1
Penokee, Graham	8-24w	12—40	1	40	10	K.C.-Lansing	3760	43	....	Truck	34	6,498	1
Prusa, Barton	16-11w	12—38	42	1,140	10, 20	Arbuckle, K.C.-Lansing, Topeka	3450	38–44	4	Pipe line	1,645	666,483	12
Rahn, Cowley	24-5e	12—39	1	20	10	Bartlesville	2960	38	....	Pipe line	22	11,453	1
Rattlesnake, Stafford	34-14w	10—38	1	40	10	K.C.-Lansing	3820	40	....	Truck	28	23,375	1
Ray, Phillips	5-20w	8—40	10	360	20	Reagan	3545	32	3	Truck	486	45,735	2
Raymond, Rice	20-10w	8—29	45	860	10, 20	Arbuckle, K.C.-Lansing	3290	41, 43	3	Pipe line	1,182	5,940,574	12
Richards, Ellis	11-19w	1—38	2	60	10	K.C.-Lansing	3300	38	....	Pipe line	41	72,808	2
Richardson, Stafford	23-11w	9—30	60	1,080	10, 20	Arbuckle	3570	41	....	Pipe line	1,484	4,066,486	5
Rick, Barton	19-11w	7—36	6	180	10, 20	Arbuckle	3355	36	....	Pipe line	115	117,680	3
Rickard, Rice	18-9w	9—35	1	40	10	Arbuckle	3350	47	....	Pipe line	20	54,409	1
Riley, Stafford	23-11w	9—40	1	40	10	K.C.-Lansing	3650	27	1	Pipe line	24	5,847	1
Ritz-Canton, McPherson	19 & 20-1 & 2w	1—29	403	6,400	10, 20	Miss. Chat., K.C.-Lansing, Viola, Wilcox	3445	32, 33	....	Pipe line	*	34,206,120	47
Rock, Cowley	30-4e	1—23	35	620	10, 20	Bartlesville	2800	32	3	Pipe line	647	1,424,351	5
Roxbury, McPherson	17-1w	11—38	35	840	20	Miss. Chat	2680	34	1	Pipe line	967	287,874	5
Rusch, Russell	14-14w	6—41	1	40	20	Arbuckle	3223	....	3	Pipe line	60	.....	1
Russell, Russell	13-14w	2—34	49	820	10, 20	Arbuckle, K.C.-Lansing	3275	36, 41	2	Pipe line	1,205	4,554,388	8
Rutter, Sumner	33-3e	.....	2	60	20	Miss. Chat	3240	....	....	Pipe line	37	49,818	1
Sellens, Russell	15-13w	6—29	26	580	10, 20	Arbuckle, K.C.-Lansing, Topeka	3250	37, 38	2	Pipe line	482	2,473,276	4
Shaeffer, Stafford	21-13w	3—41	3	160	20	Arbuckle, K.C.-Lansing	3550	31	....	Pipe line	128	4,592	2
Shallow Water, Scott	20-33w	1—35	9	400	20	Miss. Lime	4680	26	....	Truck	263	959,639	1
Shutts, Ellis	12-17w	10—28	24	480	10, 20	Arbuckle, K.C.-Lansing	3560	29, 35	1	Pipe line	519	(Combined with Bemis)	6
Silica, Barton & Rice	19 & 20-11w	10—31	733	19,000	10, 20, 40	Arbuckle, K.C.-Lansing	3290	33	7	Truck, Pipe line	19,690	32,252,423	37
Sittner, Stafford	21-12w	8—37	24	600	10, 20	Arbuckle, K.C.-Lansing	3625	41	....	Pipe line	706	83,965	4
Snider, Stafford	21-1w	5—36	13	360	10, 20	Arbuckle, Simpson	3340	36	....	Pipe line	299	263,081	3
Solomon, Ellis	11-19w	7—36	3	100	10	Arbuckle	3632	21	....	Pipe line	63	50,730	2
Sperling, Harvey	22-3w	2—35	8	160	10	Hunton	3275	35	....	Pipe line	143	309,940	4
Stafford, Stafford	23-12w	8—40	9	360	20	Arbuckle, Viola	3955	40	2	Pipe line	454	59,840	1
St. Johns, Stafford	24-13w	5—35	23	580	10, 20	Arbuckle	4100	35	2	Pipe line	748	785,924	5
Stoltenberg, Ellsworth	16 & 17-10w	6—31	147	2,300	10, 20	Arbuckle	3889	44	4	Pipe line, truck	4,432	5,498,977	29
Stoltenberg, West, Ellsworth	16-10w	7—40	5	180	20	Arbuckle	3375	44	....	Pipe line	120	25,697	4
Straub, Barton	18-11w	7—34	1	40	20	K.C.-Lansing	3226	40	....	Truck	21	(Not being Produced)	1
Susank, Barton	16-13w	11—36	6	160	10, 20	Arbuckle	3395	37	....	Pipe line	105	281,512	3
Toulon, Ellis	14-17w	12—35	4	120	10	Arbuckle	3525	33	....	Pipe line	67	159,363	2
Trapp, Russell	15-13w	4—36	622	13,800	10, 20	Arbuckle, Cong., K.C.-Lansing, Topeka	3340	36–42	9	Pipe line	17,708	20,886,859	25
Trapp, West, Russell	15-14w	9—39	6	180	20	Arbuckle	3220	35	2	Pipe line	108	50,373	3
Ubert, Ellis	13-8w	11—36	5	160	10, 20	Arbuckle	3625	24	....	Pipe line	96	135,985	4
Vaughn, Russell	14-14w	12—37	22	780	10	Arbuckle, Gorham, K. C.-Lansing	3230	40	1	Pipe line	669	858,514	7
Valley Center, Sedgwick	26-1w	8—28	140	1,640	10	K.C.-Lansing, Misener, Viola	3370	43	1	Pipe line	*	20,062,385	16
Vernon, North, Sumner	35-2e	8—30	5	180	10	Bartlesville	3450	39	....	Pipe line	100	231,391	1
Voshell, McPherson	21-3w	8—29	93	1,680	10, 20	Miss. Chat., Viola, Wilcox	3360	36, 42	....	Pipe line	1,627	23,183,717	16
Walters, Ellis	12-18w	5—36	41	910	10, 20	Arbuckle, Topeka	3700	35	....	Pipe line	1,141	1,080,959	10
Wakeeny, Trego	11-23w	8—34	14	260	10	K.C.-Lansing	3835	39	....	Pipe line	*	428,187	4
Weathered, Cowley	31-3e	7—35	27	460	10	Arbuckle, K.C.-Lansing, Stalnaker	3264	37	....	Pipe line	515	1,981,451	3
Webster, Rooks	8-19w	10—30	1	40	20	Arbuckle, Cong., K.C.-Lansing	3428	25, 30	....	Truck	28	44,080	1
Welch, Rice	21-6w	1—24	49	720	10	Miss. Chat	3375	33	....	Pipe line	*	4,248,847	6
Wellington, Sumner	31 & 32-1w	12—29	96	1,200	10, 20	Miss. Chat	3370	42	....	Pipe line	*	4,639,983	8
Wenke, Rice	20-10w	3—35	7	180	10	Arbuckle	3310	42	....	Pipe line	165	278,767	4
Wenke, West, Rice	20-10w	4—39	2	60	10	Arbuckle	3390	43	....	Pipe line	42	44,080	1
Westhusin, Rooks	9-17w	11—36	11	340	10, 20	K.C.-Lansing	3240	36	....	Pipe line	210	346,558	7
Whelan, Barber	31-11w	8—34	18	510	10, 20, 40	Miss. Chat	4320	32	1	Truck	473	396,281	4
Wherry, East, Rice	21-7w	9—37	3	100	10	Cong.	3460	40	2	Pipe line	56	78,554	3
Wilkins, Ellsworth	17-9w	4—34	59	1,260	10, 20	Arbuckle	3225	40	3	Pipe line	2,100	966,393	12
Zenith, Stafford	23-11w	9—37	267	4,200	10, 20	Misener, Viola	3757	41	10	Pipe line	8,673	4,609,090	23
Zurich, Rooks	10-19w	9—35	2	60	10	K.C.-Lansing	3485	35	....	Pipe line	33	110,807	1
Zyba, Sumner	30-1e	1—38	1	40	10	Wilcox	3889	41	....	Pipe line	21	14,629	1

* Field not prorated due to low daily productivity.

CONTROLLED VERTICAL DRILLING



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ACCURATE, ECONOMICAL, AUTOMATIC DRIFT INDICATION WITHOUT INTERRUPTING DRILLING OPERATIONS!

Automatically indicates degrees off vertical each time a joint of drill pipe is added during drilling operations. Thus, simple remedial operations may be made before the hole drifts so far off vertical that costly hole straightening operations must be performed.

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only 241 feet annually, and during the first half of this year the average is only 86 feet more than the average established in 1925. Unless and until production is well developed in Dodge City Basin, where strata are at deeper levels, the average well depth will remain nearly constant at 3000 feet.

Excluding the older and shallow sections of eastern Kansas, but including the more important fields of this area and all but minor production in western areas, the formations affording Kansas' major production are Arbuckle lime, producing in 101 fields; Kansas City-Lansing lime (Pennsylvania), producing in 70 pools; Mississippi chat (Mississippian), producing in 17 fields; Topeka sandy lime (Pennsylvanian), producing in 15 fields, and Viola lime (Ordovician), producing in 12 pools.

Kansas Production

Week Ended		Barrels Daily
May	3	209,100
"	10	196,850
"	17	218,200
"	24	216,950
"	31	208,900
June	7	201,650
"	14	218,550
"	21	231,450
"	28	237,300
July	4	241,100
"	11	233,800
"	19	239,050
"	26	241,950*

* For corresponding week 1940 daily average production was 186,200 barrels.

While the following formations produce in 10 or fewer pools, in such locations as they are found productive, they may be of first rank. The list is in order of occurrence and relative importance, but does not include rare strata or those confined to the shoestring sectors: Bartlesville, Basal sand, Hunton, Misener, Mississippi lime, Gorham, Wilcox, Simpson, Oswald, Reagan, Conglomerate, Burgess, Pre-Cambian, Stalnaker, Tarkio, Admire, Dodge and Granite wash.

By far the greatest share of Kansas prorated production is obtained from Arbuckle lime or Kansas City-Lansing strata.

Arbuckle production characteristically is pumped. There is relatively little dissolved gas in the oil and therefore little internal energy to create migration. A high prevailing water table in the lime aids in flowing the oil to the producing zone. Kansas City-Lansing production is accompanied by normal gas volumes and there is considerable dissolved gas present to create flow. The same generally can be said of Mississippi chat and Viola lime.

Exploration is still reaching out into Dodge City Basin, a large but somewhat shallow basin west and south of Central Kansas Uplift, where a half dozen fields are producing. Fair shows have been frequent in wildcat tests. This area is believed to offer attractive probabilities in Kansas City-Lansing, Mississippi lime, Viola and Arbuckle lime structures. While wildcat operations are still searching for undiscovered fields on the uplift proper, an increasing number of tests are looking for flank and pinch-out accumulation on the southwest side of the uplift. Core drill and seismograph discoveries are on an up-grade. (THE OIL WEEKLY, July 28, 1941, page 28.)

Salina Basin, north and east of the uplift, the graveyard of more than a dozen well-located tests, is not receiving the attention it has in past years. While wells in this area have encountered a good pay section, contained oil is usually dead or very poor. There is no commercial production in the basin. Along the north edge of this feature, and where it is flanked on the northeast by the extension of Nemaha Ridge, core-drill activity has resulted in acreage blocks in prospective territory. Immediately west, in Jewel and Smith Counties, structural evidence is under examination with scattered leasing resulting.

A carry-over of activity promoted by the Forest City Basin play has resulted in finding some shallow gas production in northeast Kansas. Deep core holes, or

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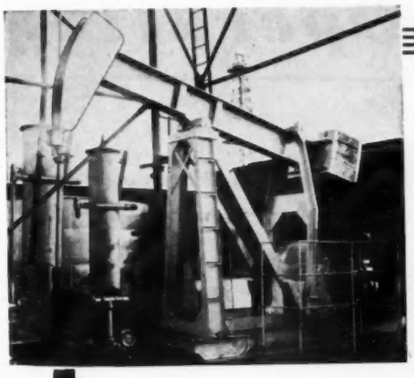
stratigraphic tests along an east-and-west line through northeast Kansas have been completed without findings being divulged. Seismograph blocks assembled four and five years ago in the vicinity of Nemaha Ridge are being retained by two major operators.

The vast area of southeast Kansas, where 12,000 wells are producing an average of about 2 barrels per day, is being constantly drilled through shallow pays at depths varying from 200 to 1400 feet. In the more desirable sectors of older production, operators are applying repressuring and water flooding to recover as much oil in the next six years as has been recovered through the prior life of such fields. Some new shallow fields have been discovered in this area as a result of normal drilling activity; and in a few instances deeper lime formations have paid off with the assistance of acid.

Nineteen new fields have resulted from wildcat effort so far in 1941. Two additional tests are in pay formation with chances for commercial completion better than 50-50. The majority of the new pools are productive in Arbuckle lime, with Kansas City-Lansing a close second. Three of the strikes are in eastern Kansas, the remainder in the western area.

Although there is no active search for natural gas reserves except in the shallow areas of east Kansas where nearby towns afford a ready market, drilling in the gas fields of western Kansas continues as markets demand greater volumes and in order to augment field reserves. Completions continue at a relatively constant pace in the major gas fields: Hugoton, Otis, Cunningham, Lyons, and in the lesser gas areas. During the first half of this year 30 gas wells have been completed for a total initial open flow of 3,215,000,000 cubic feet.

With the heightened demand for Kansas oil combined with a better price, prospects are for further increases in field activity. Increasing well allowables and a flexible acreage unit will materially aid in sustaining the present trend. Secondary recovery is definitely adding acreage to this phase of production. Prospecting is reaching into every sector and as 61 percent of drilled wells are completed by smaller operators, wildcatting will not lag. Pipe-line facilities are being increased to care for anticipated increases in demand.



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Practical Operating Hints for

1. UNITIZATION

Single Skid Base Accommodates Measuring Line, Power Drive and Accessories

Measuring line, drive and accessories are conveniently mounted on this skid base.

MOUNTING the measuring line and all accessory equipment on a light skid, one drilling company provides individual drive for the reel and keeps the entire unit out of the way of other drilling operations. The arrangement also frees the draw-works drive of powering the reel for running instruments down the hole.

The reel is carried near the front of the frame, belt-driven through paired V-belts from a speed reducer which, in turn, is belt-driven by a 3-horsepower rotary steam engine.

A sturdy wooden box, bolted to the cross member carrying the speed reducer, serves as storage for the instruments between runs.

By mounting the entire unit at one side of the derrick floor, both running and returning the instruments is under the control and direct observation of the man charged with the job. Through the throttle on the engine the speed may be regulated exactly with the lifting needs.

Due to the close regulation possible with the steam engine, the unitized reel permits the instrument to be run and retrieved without hand operation of the reel, although the final turns may be made manually by throwing off the engine drive belts and turning the large pulley on the reducer by hand.

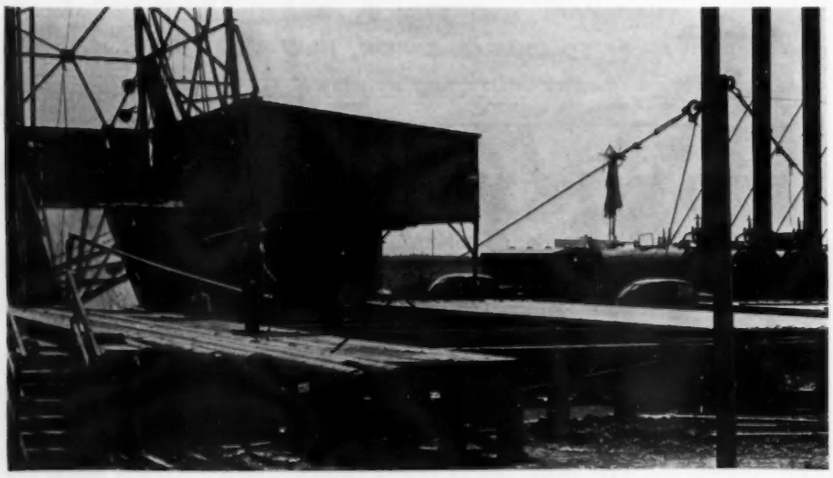
2. PIPE HANDLING

Traveling Hook Takes Weight of Pipe

A CALIFORNIA operator uses a ½-inch wire swab line to facilitate removing joints of drill pipe from the derrick floor.

A 3-inch pipe is set in the ground about 15 feet from the pipe rack, extending nine feet above the ground. It is anchored by a guy wire, and a clevis is used to attach the wire on which the drill pipe is swung from the derrick floor.

Wire line is run through a pulley attached to the far side of the derrick to the left of the draw works. To remove the drill string, a hook is engaged in a thread protector screwed into the lower end of the drill pipe. The hook is connected to the wire line extending out across the pipe rack, and as the pipe is lowered by the draw works it is guided out onto the rack. When the top end of the pipe reaches the derrick floor, the lines are disengaged and the free end of the pipe slides down a skid to the rack. When the drill pipe is drawn out to the desired position on the rack,



A wire line from the derrick floor, running across the drill-pipe rack, carries a hook that is used to lower joints of drill pipe from the derrick floor. Right, a blow from crowbar disengages pipe from wire-line hook.

a blow from a crowbar disengages the drill pipe from the wire line hook and the joint is rolled to its storage position.

When the pipe is disengaged from the hook, the hook swings free and is then run back up the wire line ready for the next piece of pipe.—*Ira M. Carroll, Los Angeles.*

3. SAFETY

Warning Signs Posted When Swabbing In

DANGER from a possible disastrous fire caused by a careless match or cigarette when a well is being swabbed in, or when gas, oil or condensate is escaping from the well, is minimized by one company by setting up demountable, easily handled "No Smoking" signs.

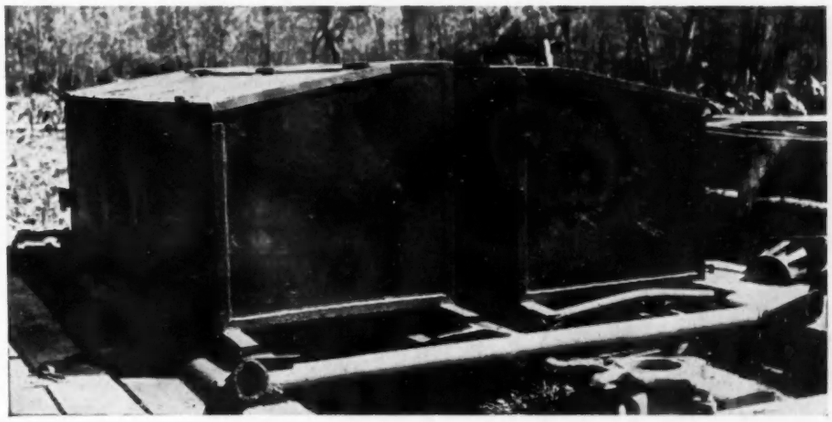
The signs are fastened to 4-foot lengths of sucker rods which, in turn, are screwed into tripod bases. The standard of each sign is the pin end of a sucker rod that screws into a rod box to which have been welded the three legs.

During normal drilling operations, the signs are demounted and stacked in some out-of-the-way corner of the location. Whenever dangerous conditions are encountered, however, the signs are quickly assembled and set out at several strategic points near the roadways, change-rooms and nearby dwellings.

Demountable warning signs are placed around rig during swabbing operations.

4. TOOL CARE

Stability and Portability Increased with Two Tool Boxes Mounted on Single Base



These tool boxes are mounted on a single skid to increase stability and portability.

STABILITY and portability may be increased by mounting two standard tool boxes on a single skid frame. Harry L. Edwards Drilling Company provides an assembly by mounting each box onto I-beams running lengthwise with the box, with each I-beam welded to 2-inch cross braces on the main frame, made of 4-inch pipe in the form of a skid. Wood platforms may be built on each side to form a convenient storage place for surplus tools while a well is being drilled.

5. EQUIPMENT CARE

Shield Protects Mud Pressure Gauge

THE mud-pressure gauge, if installed close to the driller, is exposed to mud spray when coming out of the hole, and is also subject to damage by being hit.

Overcoming these handicaps, one drilling contractor mounts the mud gauge 10 feet from the brake, blocking securely under the mud line at the point where the gauge take-off is welded in. Over the gauge and nailed to the blocking is set a carbide can, with a section cut out to expose the face of the gauge.

An extension cord, run to the protecting cover and carrying a light slung below the rim so as to illuminate the gauge face, makes the protection serviceable for all tours.

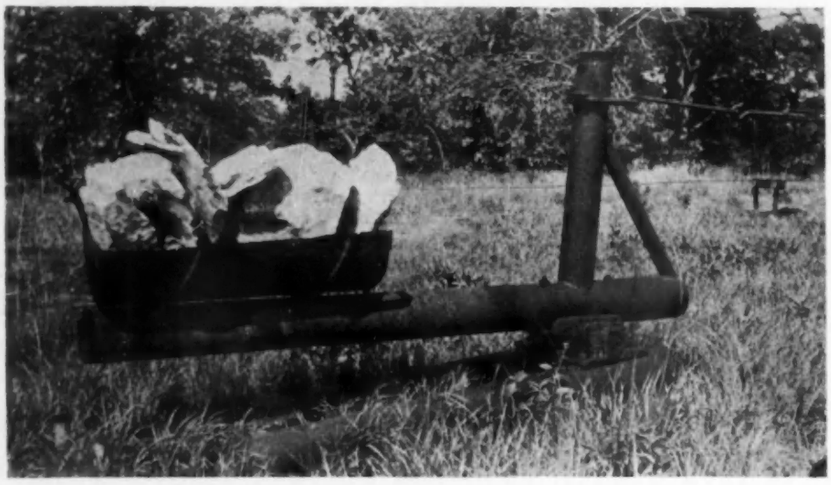
Being shielded within the housing, the gauge face is protected from the glare of the sun or other lighting units, and the mud pressure is easily read on the gauge under any lighting conditions.

Shield protects mud pressure gauge from mud spray and damage by contact.

Practical Operating Hints for

1. PUMPING

Counterbalance Absorbs Peak Power Load to Maintain Pumping Power System Balance



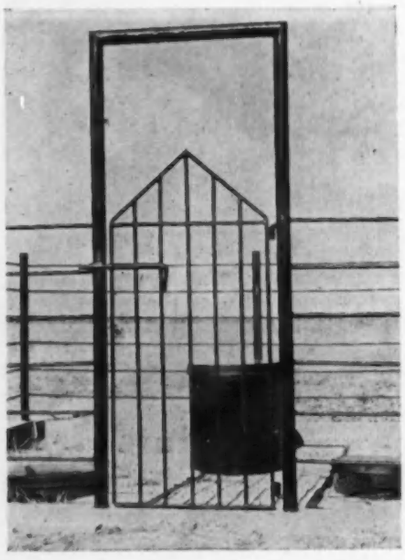
Counterbalance for pumping system absorbs peak power and maintains balance.

BALANCING a power system by means of a dummy or weighted counterbalance is necessary when the spacing of the wells, loading, or other characteristics impose a peak on the power which far exceeds the load at other parts of the working cycle.

Such a dummy can be fabricated from pipe, and set up at the point where the system requires equalization. One such counterbalance is made from two pieces of 7-inch casing bolted together and staked in position by pipe stakes driven through holes at the back or dead end. Discarded castings form a saddle and rocker base.

The saddle is attached to a third piece of 7-inch casing, to which is welded a short upright of the same material to form the attachment for the power pull line.

A weight box is made from half an oil drum, split lengthwise to give low center of gravity, welded or bolted to the horizontal arm of the dummy. The box is filled with rock, scrap iron or cement to form a weight which serves to absorb power and maintain system balance.



Fence posts are of 2½-inch pipe, with sucker-rod material used for the fence.

2. FENCING

Sucker-Rod Material Makes Sturdy Fence

ENCLOSURES for wells, line junctions, valve manifolds and other exposed equipment afford protection against trespassers and permit better maintenance of the grounds immediately surrounding the equipment.

One such enclosure utilizes pipe, 2½-inch tubing or material of that size as fence posts, setting longer posts with a cross-bar of the same material to afford continuous support at the gateway.

The fence and gate proper are built up of sucker-rod material, with all junctions welded, and with laterals spaced closely enough to prevent intrusion by stock.

The gate is swung on hinges formed from short pipe nipples, welded to the edge member of the gate itself, and turning on short right-angled stubs carried on the post and set to face, so that, when welded in position, the gate cannot be removed without the aid of a torch.

The latch is of heavy sucker-rod material, with a 90° handle at the end, and sliding in a short pipe nipple on the gate to engage with a similar fitting on the fence post.

3. WELL SERVICING

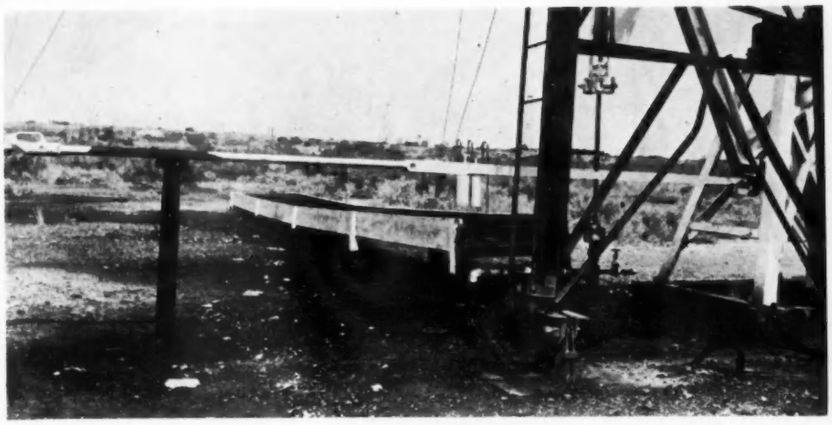
Trough Keeps Sucker Rods Free of Dirt

THE PROBLEM of properly caring for sucker rods after they have been laid down is serious on wells which have not been equipped with service derricks, but which are pulled with the aid of masts or gin poles. If the rods are laid out along the ground, a common practice, threads may become fouled with grit, and kinks or bends may enter by laying along an uneven surface.

One West Texas operator solves this problem by constructing a long wooden trough in which the

THE practical operating hints for the drilling rig and production man, appearing in these features each week, are secured from oil fields everywhere and offer suggestions that will help to improve field efficiency and safety. The items give an excellent picture of the remarkable ingenuity being exercised by the operating divisions of the industry. Contributions to these features will be paid for at the rate of $5 for each illustrated item accepted. Address contributions to "The Editor, THE OIL WEEKLY, Houston."

THE PRODUCTION MAN . . .



A wooden trough keeps sucker rods straight and clean during servicing operations.

rods can be laid out in a perfectly flat position. Built long enough to handle either a single 30-foot or two 20-foot rods, the trough is set at a slight angle so that oil will drain off the rods before they are run back into the well. The time saved in not having to stop to clean off each set of threads on the rods when they are being run into the hole more than pays for the construction of a trough at each well location not equipped with a service derrick.

4. VALVE CARE

Pipe Section Protects Junction Gate Valves

PROTECTION for junction gate valves is provided by Continental Oil Company in the KMA field by enclosing the gate in a short section of big-inch pipe, set into the ground and extending high enough to cover the gate body and stem.

In place of the usual hand wheel, a square nut is tightened on top of the valve stem, and a socket wrench provided with which the valve may be operated. To prevent loss of the wrench, a pair of hooks of steel rod are formed and welded to the fence around the junction, providing hangers in which the wrench may be laid when not in use.

A cover is provided to prevent the gate cover from being filled with dust, trash and wind-borne sand. The cover is a disc of light-weight plate, fitted with a narrow rim that fits down around the pipe valve housing. Where required, such a cover could be provided with hinge and hasp, permitting locking to prevent molestation of the gates.

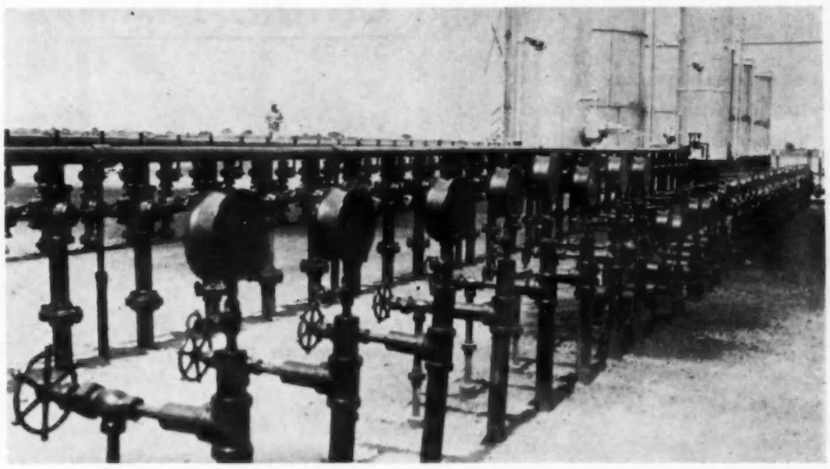
Section of large pipe with cover gives protection to KMA junction gate valves.

5. WELL HOOKUPS

Convenient Grouping of Control Valves

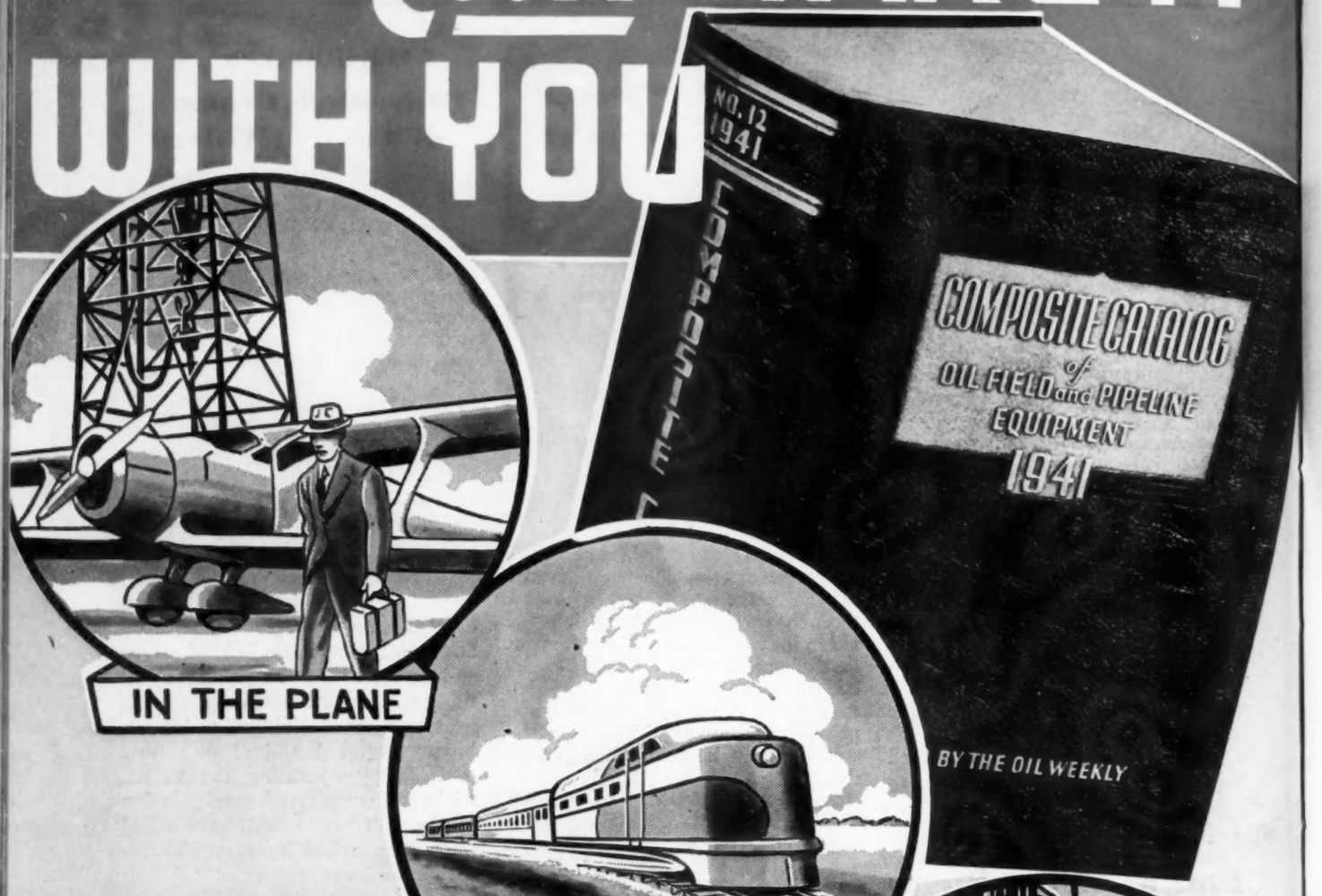
ON LARGE leases where several wells flow into the same separators and tank battery, the task of regulating their flow in compliance with proration methods sometimes becomes complicated because of the distance the pumper must walk or drive and the attention demanded by individual wells to avoid over-production. On extremely large leases it is occasionally necessary to add to the production staff, as frequently one man finds it impossible to complete the work required in the time allotted for its performance.

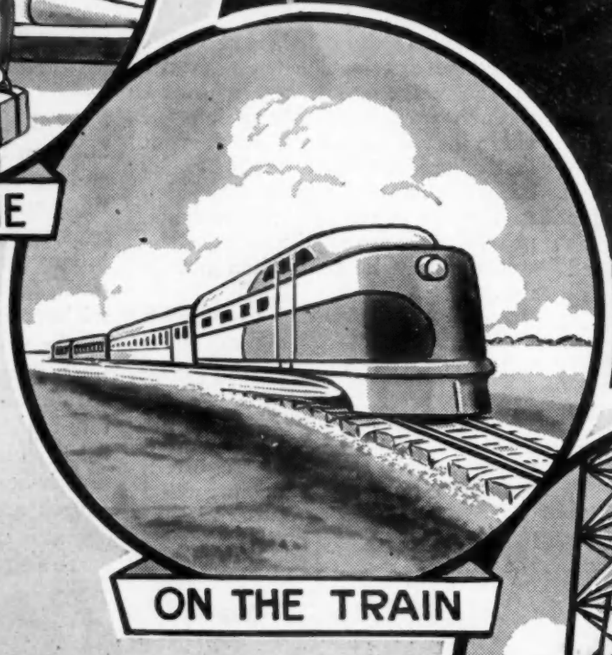
Some companies simplify and expedite the work of pumpers by centralizing near the separators and flow tanks, a manifold of valves and gauges for regulation of flow and determination of tubing pressures on individual wells, allowing opening and closing flow of fluid by operating the valves without necessity of manipulation at the well heads. All valves and lines are marked for easy identification and are equipped to flow directly into the separator manifolds to allow separate production tests when desired. As valves and gauges are arranged compactly, the operator can easily ascertain flowing pressure on all wells.



Regulation of a series of wells flowing into one separator and tank battery is simplified for pumper by arrangement of all control valves at a single point.

YOU *Can* TAKE IT WITH YOU





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THE COMPOSITE CATALOG

Allowables

Bureau Ups September Demand 20,000 Barrels

In the face of restrictions on gasoline consumption in the East which it estimated would reduce demand in that area by about 2,000,0000 barrels a month, the United States Bureau of Mines on August 21 forecast a 20,000-barrel increase in daily crude production in September, foreseeing a need for 3,960,000 barrels of domestic crude production daily during the month.

The September market demand, the bureau said, would be 7 percent above actual demand in the corresponding month last year.

Commenting upon the 10 percent cut in deliveries ordered by OPACS August 15, the bureau estimated that this objective would cut consumption in the affected area by about 2,000,000 barrels, and added that "in the forecast of the national demand for motor fuel for September this situation has been considered, although its effect is somewhat offset by increasing defense requirements and an anticipated increase in total exports.

"Stocks of all oils in the East Coast district amounted to 67,191,000 barrels on June 30, 1941, as compared to 73,099,000 barrels for June 30, 1940," it was explained. "The estimated increase during July is about 3,500,000 barrels, compared to an increase of over 5,500,000 barrels in the same month of 1940. These figures indicate a substantially lower seasonal peak of stocks than last year.

"As regards the national situation, the supply of all oils seems to be ample," the bureau said. "The seasonal level of total gasoline stocks is fairly normal, but the heavy liquidation of crude stocks might well be offset by some increases in the near future. During the second quarter of 1941, national stocks of refinable domestic crude oil decreased by 7,000,000 barrels. The principal changes by states of origin were decreases for Oklahoma, California and Illinois, while stocks of Texas origin increased. Preliminary figures for July indicate a further liquidation of 7,000,000 barrels."

The bureau found that daily average crude production during the four weeks ended August 9 was 3,788,000 barrels, and total runs to stills 3,870,000 barrels, while stocks declined an average of 152,000 barrels a day, indicating a demand for domestic crude of 3,940,000 barrels daily.

The domestic demand for motor fuel for next month is estimated at 57,500,000 barrels, an increase of 10 percent over the actual demand of September, 1940, while exports, based upon forecasts by the principal exporters, are estimated as 2,700,000 barrels, exclusive of re-exports of motor fuel imported in bond.

The bureau estimated a decrease of 1,600,000 barrels in stocks of finished and unfinished gasoline during September, on the basis of figures of 89,800,000 barrels in storage on June 30 and American Petroleum Institute statistics of a decline of about 4,200,000 barrels in gasoline inventories during July, which would leave approximately 85,600,000 barrels in storage as of July 31, or 3,500,000 barrels less than stocks on that date last year.

Benzol production and direct sales of natural gasoline are estimated at 1,600,000 barrels, making an indicated refinery production of 57,000,000 barrels, which is distributed among the several refining districts as follows:

East Coast 7,310,000 barrels, Appalachian 2,160,000 barrels, Indiana-Illinois 12,120,000 barrels, Oklahoma 3,060,000 barrels, Kansas-Missouri 3,410,000 barrels, Inland Texas 3,750,000 barrels, Texas Gulf Coast 14,160,000 barrels, Louisiana Gulf Coast 1,670,000 barrels, Inland Louisiana - Arkansas 1,040,000 barrels, Rocky Mountain 1,440,000 barrels, California 6,880,000 barrels.

Natural gasoline to be blended at refineries was placed at 7.8 percent of the total refinery production, or 4,470,000 barrels, and the yield of straight-run and cracked gasoline was estimated as 44.90 percent which, applied to the production of 52,530,000 barrels, gives crude runs of 117,000,000 barrels for the month, or 3,900,000 barrels daily.

The estimate for foreign crude runs to stills was 4,000,000 barrels, and exports were placed at a like amount, compared with actual shipments of 4,260,000 barrels in September, 1940; crude oil to be used as fuel and losses was estimated at 1,800,000 barrels.

The bureau found that the estimated demand for domestic crude is 118,800,000 barrels, or 3,960,000 barrels a day, for September, which it allocated this month for the producing states as shown in an accompanying table.

Bureau of Mines Forecast of Crude Oil Demand for September

State	Forecast Sept., 1941	Forecast August, 1941
Texas	1,378,600	1,361,600
California	634,700	641,000
Oklahoma	489,800	492,400
Illinois	392,500	390,100
Louisiana	324,000	324,500
Kansas	239,800	240,800
New Mexico	113,200	112,900
Wyoming	85,000	85,000
Arkansas	79,000	80,700
Pennsylvania	48,400	48,700
Michigan	39,500	36,000
Mississippi	33,000	25,200
Indiana	21,400	22,100
Montana	20,200	20,000
New York	15,000	14,800
Kentucky	14,600	14,200
West Virginia	12,000	11,000
Ohio	9,800	10,200
Nebraska	5,000	4,400
Colorado	4,500	4,400
	3,960,000	3,940,000

Plea for Higher Panhandle Allowable Made at Austin

The Texas Railroad Commission last week conducted its monthly state-wide proration hearing within 20 minutes, the shortest hearing held in recent years. There was no mention of "oil for Britain," which by that time had become a sore spot with everyone concerned.

For the most part, operators were entirely silent. As district after district was called, there was no response until the Panhandle was reached. Then Phillips renewed its request for a basic allowance of 98,600 barrels daily. This could be accomplished, operators said, by lifting the five shut-down days now in effect in the Panhandle, or increasing the allowable for the area as a whole.

Danciger Oil & Refineries, Inc. joined in this request, as did Sinclair. Sinclair, however, urged that more oil be produced throughout North Texas and West Central Texas, as well as the Panhandle.

In his discussion of this proposed increase, Paul McDermott, Sinclair attorney, declared demand for Mid-Continent oil was up materially. He said that the Panhandle, North Texas and West Central Texas were included in this district in United States Bureau of Mines estimates.

In April, he said, demand was approximately 70,000 barrels a day above production in this area. By May, this had increased to 86,000 barrels.

Oklahoma Can't Fill Demand

McDermott said that Kansas was now producing sufficient oil to fill its pipe lines. Oklahoma has an estimated demand for 492,000 barrels daily, which was 75,000 barrels more than the state could produce. Thus, he thought this 75,000 barrels should properly come from the Texas area which can produce it.

McDermott pointed out further that stocks in this area have dropped more than 5,000,000 barrels from the first of the year, and 105,000 barrels during the preceding week. He urged that the commission raise this allowance immediately.

Further than that, McDermott pointed out that those states which have ex-

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ceeded bureau estimates in fixing allowables have subsequently received higher estimates. He cited Kansas as a state which had followed this course, and said that by doing so, the state gained 5000 barrels in July and 15,000 barrels in the August estimate.

This stand was seconded by the Panhandle Refining Company and the Olney Refining Company, both of which are short of oil. The Olney was closed down about 12 days this month because it lacked oil, although some of its production has been paid for in advance.

Continental and other companies in the area which have been selling to these small plants have advised that they will no longer be able to deliver this oil, and the small plants can find no other production.

Meanwhile, the bureau reported a demand for 1,378,600 barrels for September, 17,000 barrels over August. Whether this would be distributed to North Texas could not be determined.

After the hearing, the commission issued an announcement on oil for Britain. It reported that oil produced and run totaled 11,332 barrels. Oil tendered to pipe lines but refused, totaled 5170 barrels. W. R. Davis, Inc., in the Rincon field, offered 2068 barrels, but Continental, the working partner, declined to join.

The commission issued two lists, one showing operators who gave oil and the other showing operators who had offered oil which was refused by the pipe line companies.

Southern Minerals Corporation led the list of donors with 4263 barrels. Frankel & Frankel, operating in the Conroe field, gave 2926 barrels. Danciger Oil & Refineries, Inc. was third with 1619 barrels.

Commissioners indicated some more oil might be accumulated, and that this would be added to the gifts.

California Keeps September Figure Unchanged

The Conservation Committee of California Oil Producers last week recommended a September allowable of 610,000 barrels daily, unchanged from the August figure and 24,700 barrels below demand of 634,700 barrels daily as estimated by the Bureau of Mines.

To provide allotments for new and recompleted wells, allowables of maximum wells were reduced 2 barrels, to 143 barrels daily, and a small reduction was made in allowables for intermediate wells.

Michigan Sets Allowable Hearing August 25

Readjustment of allowables now applied in Reed City field and a possible proration schedule for the new Roscommon pool will be considered in Lansing August 25 at a public hearing called by P. J. Hoffmaster, Michigan supervisor of wells.

Reed City is now operating on a 480-barrel per day well allowable. Hoffmaster said present rate of completions indicates a field production of 15,000 barrels a day by September 1, which he described as "close to market saturation point."

Hoffmaster also revealed he had ordered a survey of crude oils in Michigan, Illinois and the Mid-Continent to determine "whether there is any basis to claims of discrimination against Michigan crude." He said some operators have claimed that Michigan crude prices are being held down on the claim of buyers that the oil has inferior refining values.

Recommend 6000-Barrel Increase for Kansas

Kansas Corporation Director T. A. Morgan last week recommended a September allowable of 248,800 barrels daily, an increase of 6000 barrels over the August allowable and 9000 barrels above the market demand as estimated by the United States Bureau of Mines.

Morgan reported purchasers placed September requirements at 367,037 barrels and estimated maximum pipe-line capacity at 255,000 barrels.

Kansas production reached a new peak last week at over 254,750 barrels daily.

Morgan Asks Higher Price For West Kansas Oil

T. A. Morgan, Kansas conservation director, last week declared Kansas crude oil prices must be hiked to insure future petroleum development for western portions of the state.

"Producers should receive a higher price for crude oil," Morgan said, adding that drilling costs for wells in the sparsely developed southern and western areas of Kansas "will be more than triple the costs of drilling on central Kansas uplift. Present price of crude," he said, "will not more than pay for the cost of reserves being developed."

The conservation director's observations were made in response to a question by Harold Medill, counsel for the Kansas Corporation Commission, on whether the state's present oil reserves could be replaced at the current price of crude; top price being $1.25 per barrel.

July Federal Gasoline Taxes Rise Sharply

Recovering much of the ground lost in June, federal gasoline tax collections in July rose to $33,720,346 from $29,582,455 in the preceding month, it was reported August 20 by the Internal Revenue Bureau.

Collections for July were close to double the $17,595,718 recorded for that month in 1940, and brought the total for the first seven months of the year to $202,847,425 compared with $125,355,289 to the end of July, a year ago.

Revenue from the tax on lubricating oils increased only slightly—$4,107,326 in July against $4,010,109 in June, but the total for the first seven months was $23,037,945 against $17,401,923.

Taxes on pipe-line transportation were $1,159,203 against $1,261,780, but for the seven months were behind last year, $7,590,606 against $7,658,903.

While gasoline-tax collections for the first seven months were $77,000,000 above last year, there were indications that the pace of the increase would not be maintained in the face of the restrictions imposed on consumption in the eastern states, where state authorities were reported highly concerned over the fate of their road programs under restrictions which will reduce state tax collections.

Pipe Lines

Kaw Pipe Line Company Awards Oil Line Contract

Fredell Construction Company, Great Bend, Kansas, has been awarded contract by Kaw Pipe Line Company for 40 miles of 6-inch oil pipe line from the Ray pool, Phillips County, Kansas, to the Bemis pool, Northern Ellis County, with work to begin immediately.

Over 56 miles of 6-inch line has been removed by the company between its Kingwood station and Cushing, Oklahoma. The pipe has been reconditioned for shipment to Kansas.

Rock Island to Lay 30-Mile Oklahoma Line

Rock Island Oil Company has announced plans to construct a 30-mile, 6-inch pipe line from Cement field to Oklahoma Pipe Line Company's Knox station, northeast of Marlow in Stephens County. From this station, oil will be moved north by Oklahoma Pipe Line Company to Indianapolis. Capacity will be 6000 barrels daily.

Texas Company Building 45 Miles of 6-Inch in Illinois

The Texas Pipe Line Company will construct a 45-mile 6-inch oil line from Benton, Franklin County, Illinois, to join its system at Salem. The present system consists of an artery from Salem to Lawrenceville, Lawrenceville to Hayworth, and Salem to Hayworth.

Fields that will be provided new outlets by this line are Benton, Hoodville, Dale, Woodlawn and Rural Hill. Present outlets are Sohio Pipe Line Company and Illinois Pipe Line Company and numerous loading racks.

Construction will begin as soon as pipe is delivered.

Louisiana Gas Line to Be Completed This Month

Southern Natural Gas Company's 135-mile line from Logansport-Joaquin gas field in DeSoto Parish, Louisiana, and Shelby County, Texas, to Monroe, Louisiana, will be finished during August. This company is reported to have secured contract to furnish gas to Silas Mason Company's $19,000,000 shell loading plant, 20 miles east of Shreveport.

Hope Natural Gas Company is buying right-of-way for a 20-inch gas line from Monroe, Louisiana, to Greenville, Mississippi, whence it will extend northeast to West Virginia and the east.

Short Oklahoma Line

Anderson-Prichard Oil Corporation has started construction of a 6-mile oil line from the Cement field, Oklahoma, to its terminal at its Cyril refinery, where it will tie into the Magnolia Petroleum Company's 4-inch line from Cyril to Magnolia's Walters station, a trunk line system. The Magnolia line has been out of use for several years but crews are now reconditioning for immediate use. Magnolia Pipe Line Company will tender the crude to Sinclair-Refining Company for movement north to East Chicago.

Gasoline Storage Reduced in East; Fuel Stocks Increased

Statistics of the industry for the week ended August 16 confirmed assertions from Washington that the East Coast gasoline scarcity was beginning to be felt definitely.

But the figures did not appear as alarming as the reports from the national capital indicated the situation to be.

Actually, crude oil production was at a new all-time high, having climbed within 47,000 barrels of 4,000,000 daily; and refineries of the nation processed near-record volumes of crude oil, having operated at 91.3 percent of their rated capacity, and having run to stills nearly 12 percent more crude than they did on the average in August of last year, an increase that conformed almost exactly with the gain that has occurred this year in demand for petroleum products.

For the country as a whole, there was a somewhat larger than normal draft on gasoline stocks, amounting to 2,291,000 barrels, and that withdrawal reflected an extraordinary reduction of stocks on the East Coast, amounting to 893,000 barrels.

But the situations with regard to heating oils and industrial grade fuel oils were satisfactory. For the whole country, stocks of light fuel oil were increased a normal seasonal amount of 1,427,000 barrels, and the increase on the East Coast, in the amount of 656,000 barrels, was about the same as that in the corresponding week last year. United States stocks of residual fuel oil were increased 404,000 barrels during the week, and those on the East Coast were enlarged 461,000 barrels, compared with an increase of only 179,000 barrels in the corresponding week last year.

Study of these figures indicates that the industry is beginning to devote increased tanker space to movement of fuel oils from the Gulf Coast to the Atlantic seaboard, and to taper off on movement of gasoline, as the heating season approaches while the motoring season wanes. This regulation of tanker movements, in accordance with seasonal requirements, has been made urgently important by the tanker shortage. It has helped greatly in averting so far a shortage of gasoline on the East Coast, and it doubtless will be effective in helping to supply heating oil requirements of the East.

During the week ended August 16, there was a definite turn, from favorable to unfavorable, in the gasoline stocks situation on the East Coast. Up to the beginning of the week, stocks had been maintained even better than a year previously, as the industry put forth extraordinary effort to prevent a scarcity. And between July 1 and August 9, there was a smaller draft on East Coast stocks than there had been in the corresponding period last year. But in consequence of the withdrawal of nearly a million barrels between August 9 and August 16, this year's third quarter now has brought a larger draft on the East Coast storage than did the like period last year. In the 7 weeks from June 28 to August 16, this year, there has been a 2,095,000-barrel withdrawal, compared with a draft of only 1,195,000 barrels in the corresponding weeks last year. The East Coast inventory as of August 16 was 20,793,000 barrels, compared with 21,848,000 barrels a year previously.

The slowing down of gasoline deliveries to the Atlantic seaboard is being reflected meanwhile in some backing up of supplies on the Texas Gulf Coast. Only 614,000 barrels came out of storage in the latter area during the week of August 16, compared with 1,442,000 barrels in the corresponding week last year; and for the 7 weeks from June 28 to August 16, this year, there has been a net decrease of Coastal Texas stocks amounting to only 658,000 barrels, compared with one of 2,490,000 barrels in the like period last year.

Similarly, there has been lately a somewhat subnormal movement of gasoline from the Louisiana Gulf Coast.

Fluctuations in stocks of light fuel oil on the East Coast have been practically the same this year as last year, on the basis of the August 16 week and for July and the first half of August, although the inventory meanwhile has been consistently a million barrels smaller than last year. The present total of 14,438,000 barrels compares with 15,452,000 barrels on hand in the district a year ago.

The East Coast inventory situation for the light fuel oils is relatively less favorable than a year ago, considering that normal demand will be substantially larger during the coming winter than during the past winter, because of more oil burners in use, while it is to be expected that there will be difficulty in maintaining normal movement of supplies from the Gulf Coast, despite holding down of gasoline shipments to a minimum during the heating season, to provide as much tanker space as possible for the burning oils.

East Coast stocks of residual fuel oil, although increased more in the week of August 16 than in the like week last year, have expanded only 1,859,000 barrels since the beginning of July, compared with an increase of 2,202,000 barrels in the like period last year. They now stand at 10,099,000 barrels, against 11,044,000 barrels a year ago, although demand is substantially larger now, be-

Trends of Operations and Changes in Stocks

Figures are from American Petroleum Institute weekly reports, except those on crude stocks, which are from Bureau of Mines weekly reports

WEEK ENDED	Crude Oil Production (Barrels Daily)	Crude Runs to Stills (Barrels Daily)	Crude Oil Stocks (Barrels)	Gasoline Stocks (Barrels)	FUEL OIL STOCKS	
					Gas Oil & Dist. Fuels	Residual Fuel Oil
1939:						
April 22	3,526,700	3,280,000	277,156,000	[2]87,769,000	21,085,000	105,035,000
April 29	3,568,200	3,405,000	278,440,000	86,794,000	[7]25,844,000	[7]108,409,000
May 6	3,580,900	3,275,000	[3]278,607,000	86,216,000	26,167,000	108,597,000
August 5	[2]3,909,400	3,445,000	268,982,000	76,431,000	35,601,000	114,512,000
August 26	[5]1,690,800	3,475,000	246,982,000	73,475,000	37,722,000	116,237,000
October 7	3,435,850	3,505,000	231,564,000	[8]71,152,000	38,549,000	114,397,000
October 21	3,771,550	[2]3,650,000	[3]229,127,000	72,122,000	39,358,000	115,060,000
1940:						
January 27	3,611,600	3,470,000	237,339 000	87,914,000	27,407,000	103,015,000
February 24	3,732,100	3,490,000	240,836,000	96,719,000	25,390,000	103,419,000
March 30	3,841,250	3,585,000	250,561,000	101,370,000	23,778,000	105,081,000
April 20	3,858,550	3,535,000	254,881,000	[1]102,817,000	24,779,000	103,323,000
April 27	3,845,250	3,555,000	256,670,000	102,452,000	24,997,000	102,552,000
May 25	3,835,650	3,580,000	259,330,000	100,297,000	28,356,000	104,015,000
June 22	3,846,450	[2]3,690,000	260,891,000	97,276,000	32,751,000	104,683,000
June 29	3,639,550	3,625,000	262,059,000	95,142,000	33,590,000	104,486,000
July 27	3,690,400	3,555,000	262,579,000	90,173,000	38,981,000	105,924,000
August 31	3,501,350	3,575,000	265,865,000	85,393,000	44,766,000	108,774,000
September 28	3,799,950	3,600,000	263,609,000	82,273,000	47,986,000	108,450,000
October 26	3,640,300	3,565,000	262,746,000	80,891,000	[1]48,893,000	108,475,000
November 9	3,584,200	3,510,000	261,631,000	[6]79,847,000	48,408,000	107,687,000
November 30	3,335,050	3,510,000	262,679,000	80,284,000	46,212,000	106,618,000
December 28	3,385,500	3,585,000	261,552,000	83,274,000	42,266,000	102,620,000
1941:						
January 25	3,599,100	3,625,000	260,093,000	88,762,000	39,039,000	100,297,000
February 22	3,629,650	3,590,000	261,783,000	95,812,000	34,381,000	98,631,000
March 1	3,632,250	3,585,000	263,176,000	96,917,000	33,725,000	97,510,000
March 29	3,746,550	3,625,000	266,187,000	[9]99,727,000	29,949,000	96,152,000
April 26	3,726,850	3,675,000	266,149,000	96,647,000	29,543,000	94,732,000
May 31	3,786,100	3,699,000	262,356,000	93,845,000	33,524,000	92,757,000
June 7	3,816,700	3,880,000	260,956,000	92,522,000	34,305,000	93,384,000
June 14	3,822,750	3,755,000	260,464,000	92,478,000	35,060,000	93,182,000
June 21	3,857,600	3,845,000	259,142,000	91,916,000	35,736,000	93,281,000
June 28	3,847,250	3,930,000	259,399,000	91,461,000	35,732,000	92,896,000
July 12	3,870,750	[4]4,090,000	255,567,000	89,561,000	37,812,000	92,699,000
August 2	3,695,250	3,845,000	252,535,000	86,779,000	41,433,000	94,800,000
August 9	3,911,950	3,835,000	251,945,000	86,022,000	42,136,000	95,412,000
August 16, 1941	[1]3,953,300	3,920,000	.....	83,731,000	43,563,000	95,816,000
August 16, 1940	3,518,750	[8]3,508,000	[4]263,607,000	86,470,000	42,136,000	106,710,000
Change in past year	+12.3%	+11.7%	—4.4%	—3.1%	+3.3%	—10.2%

[1] All time peak. [2] Peak for year. [3] Lowest since April, 1922. [4] Stocks, August 10, 1940.
[5] Lowest since October, 1922, due to shut down of six Mid-Continent states. [6] Lowest for year.
[7] Prior to April 29, 1939, data did not include stocks at terminals, in transit, etc., except in California.
[8] August, 1940, daily average.

Wholesale Prices of Refined Products in Principal Markets

	Range Last Week (Cents a gal.)		Changes from Week Before	
REFINED GASOLINE				
Oklahoma Refineries:				
60 Octane and Under	5¼	5⅝	...	...
63-66 Octane	5⅝	6	...	...
72-74 Octane	6	6⅜	...	...
80-82 Octane, Ethyl	6½	7¼	...	...
Mid-Western Tank Car:				
60 Octane and Under	5⅛	5⅝	...	...
63-66 Octane	5⅝	6	...	...
72-74 Octane	6	6⅜	...	...
80-82 Octane, Ethyl	7⅜	7⅜	...	...
New York Harbor:				
68-70 Octane	8	8	...	...
72-74 Octane	8	8½	...	...
Min. 80 Octane, '39 Research	8½	9	...	...
Gulf Coast:				
60 Octane unleaded	5⅛	5⅝	...	...
65 Octane unleaded	5½	5⅞	...	...
68 Octane unleaded	6	6⅜	...	+⅛
70 Octane unleaded	6	6¼	...	...
72-74 Octane leaded	6	6⅛	...	—⅛
Min. 80 octane, '39 Research	6¼	6⅜	...	—⅛
NATURAL GASOLINE				
Grade 26-70:				
F.O.B. Group 3	3⅞	3⅞	+⅛	+⅛
F.O.B. Br'kenr'ge, Tex.	3½	3½	+¼	...
KEROSENE				
Oklahoma Refineries:				
41-43 water white	4⅝	4¾	...	...
42-44 water white	4½	4⅞	...	...
Mid-Western Tank Car:				
41-43 water white	4⅝	4¾	...	...
42-44 water white	4½	4⅞	...	...
New York Harbor	5⅝	5¾	+⅛	+¼
RANGE OIL				
At Oklahoma Refineries	4	4⅜	...	...
In Mid-Western Market Group 3, basis	4	4¼	...	...
LIGHT FUEL OILS				
Oklahoma Refineries:				
No. 1 straw	3½	4¼	...	...
No. 3	3⅜	3⅝	...	...
Mid-Western Tank Car:				
No. 1 white	3¾	4⅛	...	...
No. 3	3¼	3½	...	...
New York Harbor:				
No. 1	5⅝	5¾	+⅛	+¼
No. 3	5¼	5½	+⅜	+⅝

	Range Last Week (Per Bbl.)		Changes from Week Before	
HEAVY FUELS				
Oklahoma Refineries:				
No. 6	$0.80	$0.85	...	...
Mid-Western Tank Car:				
No. 5	.85	.85	...	...
No. 6	.85	.87½	...	...
New York Harbor:				
No. 5	1.65	1.75	...	...
No. 6	1.35	1.50	...	+.15
BUNKER C FUEL OIL (Per barrel, ships' bunkers)				
Gulf Coast	$0.85	$ .95	...	...
New York Harbor	1.35	1.50	...	+.15
DIESEL OIL (Per barrel, ships' bunkers)				
Gulf Coast	$1.55	$1.55	...	...
New York Harbor	2.15	2.15	+.15	+.15
Los Angeles Basin 27 gravity	1.05	1.15	...	...
LUBRICATING OIL (Cents a gal.)				
Oklahoma Refineries:				
Bright Stock, 150-160 viscosity at 210° 10-25 pour test	20½	21½	...	...
Neutral oil pale No. 3 Color, 150 viscosity at 100°, 0-10 pour test	12½	12¾	...	...
Western Pennsylvania:				
Bright Stock, 145-155 viscosity at 210°, 25 pour test	25	28	...	+2
Neutral Oil No. 3 Color, 150 viscosity at 70°, 25 pour test	31	35	...	...

cause of exceptionally great industrial activity.

As compared with the accumulation of 461,000 barrels of the heavy fuel oils in storage on the East Coast in the August 16 week, there was an increase of only 179,000 barrels in the corresponding week last year. And while the Texas Gulf Coast stocks were reduced 489,000 barrels, there had been in the like week last year an increase of 176,000 barrels. Coastal Louisiana stocks reacted similarly.

All the statistics herewith used are from the American Petroleum Institute.

Tanker Scarcity Pushes East Coast Prices Up

Markets were featured the past week by further advances of prices of most products on the Atlantic Coast, as the threat of a fall-winter scarcity of supplies appeared somewhat more serious, with release of statistics showing a lagging of the movement of gasoline.

Prices of not only gasoline but also light and heavy fuel oils and other products also moved upward on the East Coast, despite the fact that shipments of those oils into the region were normal.

At New York harbor, suppliers asked ⅛- to ¼-cent a gallon more than a week previously for kerosene and No. 1 heating oil and around ½-cent more for No. 3 grade. They quoted diesel oil, Bunker C fuel oil and No. 6 fuel oil 15 cents a barrel higher.

There was some further advance also

United States Crude Oil Production at New Peak

Estimates Compiled by The OIL WEEKLY

DISTRICT OR STATE	Bureau of Mines Estimate of Daily Demand (Aug.)	State Allowable (Barrels Daily in Aug.)	BARRELS DAILY FOR WEEK ENDED Aug. 16	Aug. 23
TEXAS—				
Texas Panhandle	.....	.....	80,400	76,100
North Texas	.....	.....	99,850	100,600
West Central Texas	.....	.....	30,350	30,400
West Texas	.....	.....	271,150	273,500
East Central Texas	.....	.....	83,800	84,500
East Texas Field	.....	.....	370,200	370,100
South Texas	.....	.....	219,450	219,800
Texas Gulf Coast	.....	.....	291,900	290,400
Total Texas	1,361,600	1,355,502§	1,447,100	1,445,400
CALIFORNIA—				
Long Beach	.....	.....	38,200	39,100
Midway-Sunset	.....	.....	50,300	44,500
Kettleman Hills	.....	.....	38,700	38,900
Wilmington	.....	.....	86,500	86,200
Others	.....	.....	441,600	425,600
Total California	641,000	610,000*	655,300	634,300
OKLAHOMA—				
Oklahoma City	.....	.....	87,250	84,350
Seminole Area	.....	.....	107,750	111,250
Others	.....	.....	223,200	229,250
Total Oklahoma	492,400	415,000	418,200	424,850
ILLINOIS—				
Salem	.....	.....	80,800	79,600
Louden	.....	.....	61,200	60,200
Centralia	.....	.....	9,400	9,150
Other New Pools	.....	.....	190,500	214,800
Old Pools	.....	.....	11,600	11,800
Total Illinois	390,000	.....	353,500	375,550

DISTRICT OR STATE	Bureau of Mines Estimate of Daily Demand (Aug.)	State Allowable (Barrels Daily in Aug.)	BARRELS DAILY FOR WEEK ENDED Aug. 16	Aug. 23
LOUISIANA—				
North Louisiana	.....	.....	79,250	74,100
South Louisiana	.....	.....	249,850	249,300
Total Louisiana	324,500	325,081	329,100	323,400
KANSAS	240,800	242,800	250,700	254,500
NEW MEXICO	112,900	112,900	110,400	114,500
EASTERN STATES—				
Pennsylvania Grade	74,500	.....	72,100	73,300
Others, Eastern	24,400	.....	18,500	18,500
Total Eastern States	98,900	.....	90,600	91,800
MOUNTAIN STATES—				
Wyoming	85,000	.....	84,600	81,500
Montana	20,000	.....	20,100	20,200
Colorado	4,400	.....	3,850	3,750
Total Mountain States	109,400	.....	108,550	105,450
MICHIGAN	36,000	40,000†	41,400	42,500
INDIANA	22,100	.....	20,400	19,200
ARKANSAS	80,700	74,428	73,500	73,900
MISSISSIPPI	25,200	.....	47,500	48,500
NEBRASKA	4,400	.....	6,150	6,750
‡Total 8 Prorated States	3,289,900	3,175,711	3,325,700	3,313,350
Total United States	3,940,000	.....	3,952,400	3,960,600

* Recommendation of Conservation Committee of California Oil Producers.
† Estimate of actual production under prescribed regulations, which do not fix a definite state total allowable.
‡ Texas, California, Oklahoma, Louisiana, Kansas, New Mexico, Arkansas, Michigan.
§ Texas Railroad Commission's estimate of actual net daily production, allowing for usual under production of 3½ percent under net allowable, which at the beginning of August is calculated at 1,404,665 barrels daily. However, allowable normally increases as new wells are completed. Under August order, most Texas fields were ordered shut down August 2, 3, 9, 10, 16, 17, 23, 24, 30 and 31. Panhandle was ordered shut down August 3, 10, 17, 24 and 31.

in prices of lubricants at Western Pennsylvania refineries, affecting particularly the bright stocks.

In reflection of the deficiency of tankers for moving petroleum products to the East Coast, there was some weakness in the market for gasoline on the Gulf Coast, and in that district, some refiners lowered their quotations on the higher octane materials ⅛-cent a gallon.

The continued rise in prices of petroleum products on the Atlantic coast apparently reflect not only the growing scarcity of tankers for supplying the district but also the substitution of other, more expensive means of transportation for part of the supplies reaching the area.

One company alone is now shipping 16,000 barrels of crude daily from the Southwest to the New York area in a combination pipe line and rail and soon will step up those shipments to 30,000 barrels daily, the transportation cost being over $1 a barrel, compared with the prevailing rate of 50 cents for shipping by tanker from the Gulf Coast to points north of Hatteras. It is estimated that the overland transportation runs the cost of gasoline or heating oil on the East Coast upward over 1 cent a gallon.

So far, there has not been any resorting to rail shipment of crude oil or products all the way from Texas and Louisiana to the New York-Philadelphia area, but if the scarcity on the Atlantic seaboard becomes acute, such shipments will be made. They would further increase the cost nearly 1 cent a gallon, even under the new, sharply reduced rates, effective August 21, which place the tariff from East Texas to Philadelphia at $1.37 a barrel, compared with $2.02 previously.

In the Middle West, refiners and marketers reported that supplies of gasoline were scarcely adequate to take care of the comparatively large demand, some of them having reported that they could have made substantially more sales if they had had the materil. Ina the Mid-Continent, too, demand for gasoline was heavy and supplies were tight.

In the Chicago district, there was good demand for light fuel oils, although early in the season, as many buyers anticipated tight supplies subsequently. Those oils were in good demand also in the Mid-Continent, and some refiners reported that they already had booked sales of their potential output for the season.

Production at New High; Illinois Rises Further

For the third consecutive week, United States crude oil production rose to a new all-time high, in averaging 3,960,600 barrels daily during the 7 days ended August 23. Output was 8200 barrels larger than in the previous week and 20,600 above the daily average market demand for domestic crude, as estimated for August by the Bureau of Mines.

Although it was the week in which "oil for Britain" day had been planned in Texas, production in that state showed a 1700-barrel decline, as only about 11,000 barrels was donated, an amount which was equivalent to only about 1500 barrels daily for a week, and which therefore had only a negligible effect on the statistics of the August 23 week, in which Texas averaged 1,445,400 barrels daily.

Oklahoma was up 6650 barrels to 424,850 daily, but failed by nearly 70,000 barrels to produce as much as indicated market demand.

Illinois showed a further sharp increase of 22,000 barrels, having averaged 375,550 barrels daily, a production within 15,000 barrels of estimated demand.

Kansas was up 3800 barrels to 254,500 daily, and exceeded by about 14,000 barrels the indicated market demand.

California declined 21,000 barrels to 634,300 daily, a rate that was 6700 barrels under demand.

Louisiana was down 5700 barrels to 323,400 daily and almost exactly conformed with estimated demand.

Sell Interest in Lake City Pool Properties

Pryor & Lockhart and Ranger Oil Company, Wichita, have announced sale of a three-quarter interest in producing and non-producing properties in the Lake City pool, Barber County, Kansas, to Luther Mackall, representing a New York firm. Pryor & Lockhart, Inc., sold two oil wells and 1850 acres of leases while Ranger Oil Company sold 1008 acres of leases. Sale price was approximately $90,000 in cash and $50,000 in oil. The deal was negotiated by Gilbert Moore, geologist, representing Mackall.

Cracking Plant To Be Built at Stephens, Arkansas

Benedum & Trees Oil Company will start construction immediately on a cracking plant at Stephens, Arkansas, to handle the company's heavy crude from the Troy field, Nevada County. Ten-inch pipe for a 10-mile welded line from the refinery to the field has been ordered, along with three 10,000-barrel tanks.

Frick-Reid Receives H_2S Removal Contract

The Engineering and Construction Division of Frick-Reid Supply Corporation, Tulsa, has been awarded a contract by Skelly Oil Company to build a hydrogen sulphide removal plant at Eunice, New Mexico. The plant will handle 20,000,000 feet of gas per day, using the Koppers Company Seaboard process.

Central Petroleum Moves From Tulsa to Wichita

Central Petroleum Company on September 2 will remove its offices from the National Mutual Building, Tulsa, to 514 Bitting Building, Wichita. Its new mailing address will be Box 88.

Personnel affected by the transfer includes Nate Appleman, F. W. Simms, Myer J. Dritch, Clair A. Foster, C. N. Gilbert, John T. Crane, Don Wines and Miss Inez Cohen.

World-Wide Developments

Alberta Production Slightly Above a Year Ago

The province of Alberta, Canada, had a daily average production of 27,144 barrels of crude oil during the week ended August 11, of which 26,850 barrels came from the Turner Valley field. This output compared with 26,690 barrels produced during the corresponding week a year ago.

At present, there are 28 wells drilling in the province, of which 21 are in the Turner Valley field. Three new locations were staked at Turner Valley during the week, and three other wells were testing.

Turner Valley Price Increase Expected; Stocks Down

A further increase in the price of crude oil is anticipated in Alberta. The price situation in the province is rapidly being brought to a head, as the Dominion Oil Controller has moved too late and the Alberta government has made no move towards increasing development of the oil field. If the Dominion or the Provincial authorities had acted earlier, oil men in Alberta contend the Prairies could have been assured of an adequate oil supply this fall. As the situation now stands, no such guaranteed supply can be relied on.

Due to slackening of drilling in recent months, the Turner Valley field faces a reduced number of completions during the fall, with the inevitable result that production will show a decline from the current level.

At the present, prairie stocks of both crude oil and refined products are less than they were at the start of harvest last year. Because of army and air-force requirements, demand for oil products is somewhat larger than it was a year ago. If all essential requirements are to be met, a million or more barrels must be obtained from Montana and other United States fields.

The impact of sizeable quantities of high-cost imported oil or refined products appears likely to smash the artificial non-competitive price level that has prevailed in the Turner Valley field since the start of the war. It is estimated that, even with the 27-cent-per-barrel boost in prices effected July 16, the Turner Valley price is still around 53 cents under the actual competitive value.

German Oil Setup Described in Berlin

The political nature and pan-European scope of the Hitler government's Continental Oil Company set up last March has recently been outlined in Germany.

Capitalized at over 80,000,000 reichsmarks, it is intended as a gigantic holding company under government control to seize for Germany virtually the entire oil industry of Europe and enable Germany to dictate terms under which oil-producing regions outside Europe may find European markets.

Created at the direction of Hermann Goering, the company has a board composed of various government officials, heads of German oil, coal and lignite companies, and bank officials. Within Germany the oil production and distribution industries are completely under

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Lv. HOUSTON.....4:45 P.M.

Connections at Dallas for West Texas, Oklahoma, Arkansas, Colorado, Kansas City, St. Louis.

Lv. DALLAS.....5:00 P.M.

Connections at Houston for Beaumont, New Orleans, East, California, Corpus Christi, Rio Grande Valley.

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control of this parent organization including their allocation of labor and capital. The organization has a labor committee to handle labor relations and scales of pay. Plans for operation outside Germany would give the government absolute control over German-owned companies, which would receive government financing for their operations and political protection in case of hostility on the part of subject countries.

Concentration of the European oil industry to assure the continent a supply of oil uninterrupted by political troubles is the announced objective of this enterprise. Rumanian oil is already flowing to Germany, but not in sufficient volume to meet requirements of that part of the European continent centered at Berlin.

Colombia Looks Toward Tropical Properties Operation

Government operation of Tropical Oil Company's properties on the De Mares concession in Colombia was foreshadowed in a recent statement of Dr. Juan Pablo Manotas, minister of mines and petroleum.

Referring to the government's suit in the Colombian supreme court to terminate life of the concession in 1946, Manotas declared in a financial journal that "there is a decided need to prepare nationals (Colombians) in the various specialized activities of the oil industry now that we may be called upon to assume the responsibility of administering directly the important oil enterprise established at Barranca Bermeja by the Tropical Oil Company."

Manotas emphasized that the supreme court is still considering the issues involved in the case but recommends that trained operating personnel be immediately available if the court does not sustain Tropical Oil Company's contention that the concession expires in 1951. Decision of the court is expected within several months. The government's action is not an arbitrary expropriation move, but a suit centering about the date on which exploitation of the concession formally began.

Tanker Shortage Brings Rationing in Brazil

Shortage of tankers has reduced Brazil's imports of petroleum products to the point where rationing has been instituted. Sales of gasoline have been limited in several cities and the government is studying means of allotting gasoline in accordance with need. A fuel oil shortage also exists.

Last year, 280,000 barrels of alcohol were blended with gasoline for use as motor fuel. The government is fostering the use of producer-gas vehicles, and a number of such vehicles are in use in Rio de Janeiro. Government drilling is under way in several regions of Brazil, but as yet the country has small commercial production only in the Lobato field in Bahia.

Mexico Test Showing

Promising shows of oil in a privately drilled well in the Cuidad Juarez vicinity of Mexico, near El Paso, are reported by the Ministry of National Economy. Drilling below 2600 feet, the test is owned by Compania Petrolera de Chihuahua, which recently obtained a government concession in the vicinity.

U. S. FIELD OPERATIONS

Illinois Basin

Clinton Wildcat to Test Benoist 25-Foot Section

Clinton wildcat cored 25 ft Benoist saturation; casing set in White wildcat; pipe set at Trenton wildcat, St. Clair County; Aux Vases may pay off in Wayne County's new Jacksonville field.

Clinton County: Texas Co.'s Peter Gray 1, C S½ NW SE 35-3n-2w, 4½ miles northeast Carlyle, Benoist saturation 1200-25 ft, drilling 1673 ft for Devonian; elevation 428 ft, Glen Dean 895 ft, Hardinsburg 925 ft, Golconda 950 ft, Cypress 1075 ft, Weiler 1082 ft, Benoist 1197 ft, Renault 1225 ft, Aux Vases 1236 ft, McClosky 1405 ft.

White County: Yingling & Hays' Zola Shepard 1, NE NE NE 5-4s-10e, plugged back from dry McClosky, casing 2900 ft to test 18 ft Cypress, elevation 383 ft, Glen Dean 2647 ft. Texas Co.'s A. J. Poorman 10, SW SE SW 19-3s-8e, extended Mill Shoals field ½ mile west, 200 bbls daily.

St. Clair County: George Morris et al's Vistor Rasp 1, NW SW 32-2n-7w, waiting on cement with oil string on Trenton 1955 ft; Cypress 402 ft, McClosky 627 ft, Devonian 1513 ft.

New Pays: West Centralia pool, Clinton County, Sistler-Strawser's Phoenix 1, NE SW SW 14-1n-1w, 6 bbls hourly, Benoist sand, bottomed 1441 ft, natural, after deepening from Cypress; only producer in area, completed many months ago as small Cypress well. Johnsonville field, Wayne County, Wiser's A. A. Watson 5, C N½ NE NE 34-1n-6e, filled 2500 ft oil Aux Vases 35 minutes, drill stem, drilled on to McClosky, so far field's only pay.

Gallatin County: Angle and Angle's Daly 1, SE NE SW 25-8s-9e, to deepen after unsuccessful test Tar Springs show 2136-43 ft.

Richland County: Ohio Oil Co.'s Koertge, C S½ SE NW 29-2n-14w, pool opener, 880 bbls 14 hours natural, McClosky lime, 3117-29 ft. C. R. Craft's M. Daubs 1, C W½ SW NE 8-2n-14w, pool opener, 1500 bbls 24 hrs after acid, McClosky 3144-ft; elevation 507 ft, Menard 2355 ft, Walterburg 2397 ft, Glen Dean 2584 ft, Hardinsburg 2605 ft, Golconda 2681 ft, Benoist 2960 ft, Renault 2991 ft, Aux Vases 3006 ft, St. Genevieve 3122 ft.

Franklin County: Oil Carriers, Inc.'s Wayman 1, SE SE NE 1-8s-2e, waiting on squeeze job before testing Rosiclare 2743-ft after plug-back from McClosky from which water with scum of oil was swabbed.

Rotary Being Moved in For Posey County Wildcat

Derrick was up for Posey County wildcat near Savah; test abandoned in Welborn Switch area county.

Posey County: In west Lynn Township 2 miles north of Savah, Morgenstern Oil Corp. was moving in rotary for Harry Mentzer 1, SW NW NE 34-5s-14w, Carter Oil Co. farmout.

Abandoned through Aux Vases at 2825 ft was Whisenant & Trenchard's James Bundy 1, NE NE SW 17-6s-14w, two locations west of operators' McFadden 1, recent Cypress sand discovery.

Daviess County—In new gas field 2 miles north Glendale, R. D. Brown et al's McCracken 3, N½ NE NE 21-2n-6w, 600,000 ft gas, Cypress 720-9 ft. Operators' Birch 1, C S½ SE SW 21-2n-6w, abandoned. Chapman 1, C SW SW 15-2n-6w, spudding.

Oklahoma

Okfuskee Wildcat Flows 1000 Barrels; Cromwell Extended

Okfuskee County wildcat flowed 1000 barrels; East Cromwell pool extended ¾-mile east; Bartlesville sand prolific new horizon Guthrie pool, Logan County, two Osage County pool openers, and Wildhorse extended north; Lincoln County gas discovery gauges 7,000,000 ft.

Okfuskee County: Malernee Oil Co. et al's Beard 1, SE SW NE 7-11n-8e, 4 miles west Dill pool, Cromwell sand 3695-3710 ft, 7-in casing 3690 ft, 610 bbls oil 18 hours, 2,000,000 ft gas, flow increasing to 50 bbls hourly with hole cleaning out, defined to south by 3 dry holes. Operators requested 10-acre spacing, immediate offsets announced.

W. H. Allen et al's Camp 1, SE NE SW 18-11n-9e, 2 miles north North Cromwell pool, moving in materials. Shell Oil Co.'s Palmer 1, SW NW SW 6-10n-9e, East Cromwell outpost, plugged back 3985 ft Hunton lime, topped 3882 ft, perf 12 holes 3946-59, 12 holes 3935-46 ft, increase gas; perf 57 holes 3935-75 ft, 1000 gals acid, swab 75 bbls oil, 332 bbls water 24 hours. Same operator's Heffner 1, SE NW NW 17-11n-9e, drilled 4126 ft dry Wilcox sand, cemented 4½-in casing 4004 ft, perforating Hunton lime show. W. C. McBride, Inc. et al's Long 1, SEc SW 17-12n-10e, mile south Morse, abandoned 3801 ft Wilcox sand. C. E. Beal et al's Allen 1-A, NE SW NW 14-13n-9e, 2 miles northwest Haydenville pool, moving in.

Guthrie Pool: Sunray Oil Co.'s McLeod 1, NEc SE 12-17n-2w, west edge pool, defined Wilcox sand production by water, total depth 5505 ft, plugged back 5172 ft, ripped casing 5109-23 ft, shot with 60 qts. Bartlesville 5108 ft, pay zone 5109-23 ft, bailing sand tamped shot and well caught fire, destroyed derrick, shut in after 2 hours; 154 bbls 38-gr by heads 24 hours with sand line and bailer in hole; 138 bbls second 24 hours, no water, cleaning out and testing. W. C. McBride's Eastwood 4, SW NW SW 7-17n-1w, drilled out cement plug 5440 ft Wilcox sand, casing swab recovered 208 bbls oil, 5.3 bbls water 15 hours, testing.

Hughes County: Potco Oil Corp. et al's Morrison 1, NW SE SW 13-9n-9e, East Wetumka pool, initial Hunton lime production, lime 3738 ft, total depth 3761 ft, 1000 gals acid, 185 bbls oil, 21 bbls water 3 hours, 9/16-in choke, 45-gr, dropped 20 bbls hourly, water, pulled tubing to determine water source.

Deep Rock Oil Corp. et al's Davis 1, W½ SW SE 27-5n-10e, 3½ miles southeast Calvin pool, 2720-acre seismograph block, Carter Oil Co.'s farmout, contracted 5000 ft or Calvin sand, H. G. Marshall awarded contract, structural feature important with major fault cutting south line of block and northeast-southwest trending fault evident on east line, soil analysis survey west edge, supported by Barnsdall Oil Co., Wilcox Oil & Gas Co., with Magnolia Petroleum Co. and L. H. Wentz buying close in.

Cumberland Pool: Pure Oil Co.'s reported initial failure for area at Thompson 2 (107), NE NW NE 33-5s-7e, southwest production, Marshall Co.; Bromide zone 4735 ft, shut down orders 5126 ft. On Bryan County side, Little 1 (208), SW NW SW 27-5s-7e, total depth 5073 ft, plugged back 5057 ft, showing oil and water.

Kansas

Five Strikes Scattered in 3 Counties; Chase Extended

Barton County rated two pool discoveries; Lansing strike in Ellis County, with another wildcat testing Arbuckle; Cowley and Rooks County gain new pools, promising wildcats testing Lansing-Kansas City in Russell County and Viola in Sedgwick County.

Barton County: H. B. Mabee, W. O. Allen et al's Stoskopf 1, NW¼ 29-16-13w, south of Trapp pool, Lansing 3147 ft, Arbuckle 3373 ft, 5-in 3374 ft, total depth 3390 ft, filled 1700 ft oil 16 hours, temporary potential 50 bbls daily.

W. M. Bartlett et al's Wondra 1, SE NE NE 5-17-13w, 2 miles west Ainsworth pool, Topeka 2830 ft, Lansing 3118 ft, Arbuckle 3357 ft, 5-in casing 3358 ft, 850 ft oil 5 hours, 1000 gals acid, temporary potential 96 bbls daily.

Ellis County: Darby Petroleum Corp. et al's Dreiling 1, SEc NW 28-13-17w, South Catherine pool discovery, Lansing 3259 ft, total depth 3534 ft in Arbuckle, 7-in 3521 ft, perforated 72 holes 3285-3294 ft in Lansing, 1500 gals acid, drilled cement out, filled 1400 ft oil 450 ft water, pay 3345-51 ft, moving in tanks for test. Operator's Giebler 1, C E½ NW SE 27-13-20w, 8 miles northwest Kraus pool, Arbuckle 3834 ft, casing 3833 ft, total depth 3850 ft, some saturation in core 3845-50 ft, drilling plugs to test.

Cowley County: Phillips Pet. Co. et al's Bruce 1, NWc NE 9-30-4e, between Rock and North Rock pools, temporary potential 87 bbls daily, Arbuckle lime 3315 ft, to acizide and complete. Rock pool productive from Burbank sand.

Russell County: Helmerich & Payne et al's Jennrich 1, C W½ NW SE 13-12-15w, 3 miles east north end Fairport pool, picked up show oil 2828 ft Topeka, cored full saturation in Kansas City-Lansing lime 3158-70 ft, ran electric log, cemented 7-in 3160 ft, ran 2½-in tubing to acidize and test.

Nebraska

Wildcat Activity Extended To Three More Counties

Wildcat effort spreads to Gage, Sarpy and Johnson counties; Falls City producer deepened to Lower Hunton for 1500-bbl well; two Harlan County wildcats dry in Arbuckle, testing oil shows in Kansas City-Lansing lime section.

Harlan County: Veeder Supply & Development Co. et al's Battin 1, C N½ SE NW 15-2n-18w, near Alma and north Kansas State line, ripped casing 3585-92, 3575-80, and 3541-65 ft, 1000 gals acid, swabbed 5 gals oil, 45 gals water hour; squeeze cementing for water shutoff, will perforate upper shows 3385-90 ft, small producer indicated. Operator's Alter 1, C W½ SW NW 15-1n-18w, 6 miles south Battin 1, Pierre 110 ft, Niobrara 170 ft, Ft. Hays 630 ft, Codell sand 670 ft, Carlile 680 ft, Greenhord 890 ft, Dakota 1000 ft, Permian 1500 ft, Stone Corral 1760 ft, Shawnee group 2980 ft, Topeka 3165 ft, encountered several good shows oil in Lansing-Kansas City lime series; Marmanton 3575 ft, Conglomerate 3789 ft, Viola 3847 ft, Simpson 3920 ft, Arbuckle 3958 ft, coring below 4100 ft, porous lime, contract depth 4200 ft, 9000-acre block.

Falls City Pool: Skelly Oil Co.'s Wallraff 4, SW NE SW 20-1n-16e, old total depth 2246 ft, deepened 2284 ft, 1166 bbls 21 hours, testing. R. L. Campbell et al's Schock "B" 5, C N½ NE NW 29-1n-16e, rotating below 2200 ft.

Sarpy County: Sherrod & Allen et al's Seibold-Clark 1, NWc SW 3-12n-11e, below 500 ft. Dr. Simmons et al's Timm 1, C S½ SW SE 15-13n-12e, old total depth 416 ft, cleaning out, to deepen.

Gage County: Bee-Dee Oil Co. et al's Bankers Life 1, NWc SW 16-3n-5e, 5 miles southwest Beatrice, drilling 250 ft. Walter Rider et al's Warren 1, C NE NE 21-3n-5e, electric log, show gas 1885 ft, Hunton 1930 ft, show gas 2000-20 ft, saturation 2535-40 ft, Viola 2565 ft, some saturation 2605-30 ft, Decorah shale 2680 ft, St. Peter 2863 ft, Pre-Cambrian 2820 ft, total depth 2858 ft, 5½-in 2698 ft, drill plugs 2608 ft, water; perf 1990-96, 2310-12 and 2000-05 ft, water, shut down for orders.

Johnson County: Anderson & Stone et al's Eilers 1, NE 29-6n-10e, drilling 475 ft.

North Texas

Three Montague County Wildcats Showing Production

Three Montague County wildcats showing for oil producers on preliminary test. Two tests near Electra's Ellenberger discovery disappointing. Prospective new pay levels in two Clay County pools offer small yield.

Montague County: Walter Gant's Turner 1, NEc E.T. Ry. Section 59, 5½ mi northeast Bowie, ½-mi southeast of a 7333-ft junked well on the geophysical prospect, recovered 1110 ft oil and 40 ft oil-cut mud on 35-minute drill-stem test 6223-38 ft in Bend, topped 6057 ft, 36 ft high. Awaiting pipe to complete this level. Production from conglomerate 6222-34 ft. Gant and Continental Oil Co., owners of a large block in the area, lost their first hole while showing for producer after plugging back from Ellenberger.

Gibson & Jennings' Howard 4, NW NE Section 90, Kaufman CSL, 2 miles southeast of 1700-1800-ft oil production in Holt pool, swabbed and flowed oil and water on 36-hour test through perforations 3931-40 ft in middle Strawn, plugged back from granite 4506-15 ft, 7-in 4102 ft. Original perforations cemented to re-perforate, as electrical formation survey places top oil saturated sand 3930 ft and no water above the 3970-ft level. This pay is the equivalent of the 3400-ft sand in Benton-Holmes pool. The oil tests 43-44-gr as compared to 31-32-gr in Holt shallow pool, which has granite at 3615 ft. Operators have 1500 acres leased around Howard 4, and Continental Oil Co. will drill a north offset. Shell Oil Co.'s Thomas 1, Block 95, Kaufman CSL and 1⅝ miles northeast Holt pool, provided the third strike in swabbing 15 bbls. 28-gr oil on 10-hour test after 42-quart nitro shot 3034-47 ft, having plugged back from water in Ellenberger 4144-4646 ft, 4½-in 3023 ft. Another nitro shot is scheduled before putting on pump.

Superior Oil Co.'s Seay 1-A, north offset to Ringgold pool east extension producer, averaged 1½ bbls. oil hourly on 24-hour swabbing test from perforations 5778-5804 ft in Bend, topped 5644 ft, 36 ft high, and failed to increase fluid level after using 1000 gallons acid mud. Plugged back from dry Ellenberger 5918-6017 ft. Benson Bros.' Seay 1, the original extension well, flowed 117 bbls 45-gr oil natural 6 hours when deepened from 5762 ft to lower conglomerate 5772-76 ft. Benson Bros., et al's Lowery 1, semi-wildcat and 2 miles north, abandoned in Ellenberger 3036-3166 ft.

Sinclair Prairie's McCall 1, west offset Clingingsmith pool 6131-ft discovery, drilling shale 6157 ft. Drill-stem test on oil-saturated lime 5915-30-ft yielded 150 ft mud and 60 ft oil-cut mud. Company's Lemon 1, south offset discovery, drilling shale 5710 ft.

Wilbarger County: Magnolia's Waggoner-H&TC 64, southeast of Electra field's Ellenberger discovery, failed to make producer after acidizing Ellenberger 3008-17 ft, also tested water through perforations 2256-59 ft in Canyon, topped 2263 ft. W. T. Waggoner Estate's Fee 33, west of the deep discovery, re-perforating after yielding oil and water 2986-90 ft.

Wichita County: Huckelberry and Cline's Stone 4, GC&SF Section 2, A-758, offers prospects of Ellenberger oil production on northwest edge of K-M-A Strawn field, and mile southeast of the single Ellenberger oil well in old South Electra field. Stone 4 has 5½-in at 3705 ft on top of Ellenberger to test saturation 3715-26 ft. Three previous completions on the lease registered comparatively large initial flows from 3600-ft Strawn sandy-lime.

Clay County: Continental et al's Ross 3, southeast edge Ross-Jolly 5300-ft Bend lime pool, swabbed dry after 200-qt nitro shot in lower pay, involving conglomerate saturation 5616-78 ft, bottomed in dry Ellenberger 5766-5846 ft. Hole filled 200 ft with oil after cleaning to bottom, and may make pumper. Partnership's Ross 4, north offset, showing for good flow after acidizing Bend 5384-5493 ft. Bridwell Oil Co.'s Halsell 8-A, northwest outpost Halsell pool and first try for completion in Strawn 3654-63 ft, showing small volume oil on preliminary test. Shell's Coleman 2-A, north offset the discovery of New York City pool, trying restore circulation 6152 ft in Mississippian, topped 6137 ft, being flat with first completion.

West Texas

New Shallow Oil Field Opened in Crockett County

Crockett County gets new shallow oil pool. Lubbock County oil discovery reaches depth contract without getting water. Two outposts starting near Reagan County Ordovician strike. Prolific completions in Crane and Ector counties. Upton County Ordovician prospect passes up gas shows.

Crockett County: R. H. Henderson et al's Couch-Shell 1, NW NE HE & WT Section 37, Block GG, 9 miles southeast Soma-Noelke pool and 4½ miles south by east of nearest production, filled 880 ft with oil from sandy-lime 2166-80 ft, elevation 2733 ft. Top lime called 1928 ft, driller's measurement. Pipe will be set for completion. Humble, Shell and Cities Service made acreage and dry-hole contributions, with former two retaining production rights below 2250 ft. Amerada et al's Todd 1-B, mile northwest outpost Todd deep pool, showing little green oil with sulphur water on preliminary swabbing test after using 2000 gallons acid through perforations 6260-85 ft, with tubing packer 6255 ft, in Ellenberger, topped 6202 ft, 66 ft low to partnership's Todd 1-A. Test also to be made through perforations 6202-52 ft, then if dry to plug back for test of Crinoidal, topped 6050 ft, being 496 ft low.

Lubbock County: L. C. Harrison et al's Nairn 1, 3½ miles northeast Lubbock and first deep test for county, logged broken oil saturation and porosity in deepening from 4915 ft to 5000 ft, but failed to boost the fluid level. Swabbing test at 5000 ft yielded 3 to 5 bbls cut-oil hourly, but no water. This isolated wildcat swabbed 10 bbls 31-gr oil hourly when acidized with 2000 gallons at 4893-4915 ft in Clear Fork topped 4550 ft, elevation 3203 ft. Production is from the equivalent of Tubb pay in Sand Hills field, and near base of Clear Fork. Nairn 1 is 35 miles east by north of Slaughter field, nearest production, and its relatively high position is due to buried granite ridge to north. W. Earl Smith and N. C. Walter assumed obligation to start test within 45 days in acquiring lease from Lubbock on its 886-acre sewage disposal plant, southeast of city limits.

Reagan County: Amerada's University 1-R-A, southeastern corner of county and on 24,000-acre block, quit drilling at 9294 ft in Ellenberger, topped 8960 ft, elevation 2768 ft, and was swabbing down. This wildcat flowed 98 bbls 44-gravity oil 24 hours natural via 12/64-in choke from Ellenberger saturation 9017-50 and 9060-66 ft when bottomed at 9080 ft. Some porosity was logged below 9200 ft in deepening, but samples failed to indicate if same carried water. Company has designated new strike as Barnhart pool. Locations made for University 1-R-B, C NW NE Sec-

tion 8, 4000 ft south by west, and University 1-R-C, C SE SE Section 4, Block 48, 6000 ft southwest discovery, to be drilled to Ordovician and 2700-foot levels, respectively.

Big Wells: Sinclair Prairie's Johnson 14-D, SW NE T&P Section 25, southeast sector North Cowden field, Ector County, flowed 2416.54 bbls oil 24-hour open casing and tubing gauge natural at 4163 ft. Company's Johnson Est. 1, wildcat between latter field and the northeast sector of Foster field, bailed 1 bbl oil and 20 bbls water when cleaned out to 4288 ft following nitro shot at 4338 ft. Gulf Oil Corp.'s Waddell 44, NEc NW NW PSL Section 14, Block B-23, ½-mile south of prolific section of Gulf-Waddell field, Crane County, earned potential 9496 bbls 35.5-gravity oil following 5000 gallons acid main pay 3489-92 ft.

Abell Expanded: Magnolia's Young-State 1, SWc H&TC Section 4 and ¾-mile east of production, flowed 1425 bbls 44.3-gravity oil potential ½-in tubing choke, upper McKee sand 5100-45 ft, elevation 2390 ft. Sinclair Prairie Oil Co.'s Silverman 1, west offset most southerly producer, flowed 493 bbls oil 4 hours and 8 minutes 1-in tubing choke, perforations 5193-5208 ft. Topped Simpson 4820 ft, Tulip Creek 4835 ft, McKee sand 5189 ft, elevation 2394 ft.

East Texas

Henderson County Wildcat Indicates Rodessa Oil Well

Henderson County deep wildcat flowing small volume oil with drilling fluid from Rodessa member Trinity. Test pending on Gregg County deep prospect. Wildcat failures Cherokee and Franklin counties.

Henderson County: British-American Oil Producing Co.'s Young 1, 7½ miles southwest Athens, flowing 5 bbls fluid hourly, averaging 5 percent high-gravity oil, balance rotary mud and slightly brackish water, 239 perforation between 7739-7836 ft; no appreciable volume gas; will acidize, production from Rodessa series 7606-7836 ft, elevation 393 ft.

Gregg County: Roger Lacy et al's Flanagan 1, 4 miles south Willow Springs deep pool, cemented pipe 7340 ft, total depth 7502 ft; perforated opposite Pettit, testing.

Camp County: Talco Asphalt & Refining Co.'s McKenzie-Shell 1, ¾-mile west production Pittsburgh 2-well oil pool, coring 8035 ft, favorable oil saturation intervals below top Travis Peak sand 7956 ft, flat with completed wells.

Cherokee County: Bobby Manziel et al's Limerlog School 1, third test for the group on the Larissa prospect, yielded abundance salt water on series tests through perforations opposite Woodbine with 5-in on bottom at 5150 ft.

Franklin County: W. B. Hinton et al's Hargrave 1, wildcat west part county on Sulphur Bluff-Talco fault trend, eliminated as Paluxy prospect when drill-stem test 4752-4828 ft yielded salt water. Logged first Paluxy sand 4553-98 ft; operations halted 4828 ft.

Wood County: Roger Lacy et al's Snider 1, 5800 ft east by south Hawkins field production, abandoned in Woodbine water 4990 ft, 600 ft low in logging Austin Chalk 4580-4660 ft, elevation 306 ft.

Texas Gulf Coast

Clodine Area Extended; New Danbury Field Sand

Three extension tests attracted interest.

Ford Bend County: Providence Oil Co.'s Wing 1, Clodine area, completed 195 bbls 42-gr oil 9/64-in choke, sand 7484-7515 ft, location 4500 ft northeast Clodine discovery. Rig moved to Wing 1-A, between 2 producing wells.

Brazoria County: Rowan Drilling Co.'s Jamison 13, Danbury field, new shallow sand below 3400 ft, drilled 5640 ft, perforated 3414-40 ft; flowed 204 bbls 24-gr 24 hours 3/16-in choke, tubing pressure 350, casing 1050 lbs. Location 2270 ft northwest Jamison 5, nearest regular pay producer.

Tyler County: Republic & Houston's Hurd 52, Joes Lake field, looked disappointing in deeper horizons; brackish water, small amount gas perforations 9355-72-ft; drilled 10,625 ft before plugging back.

Montgomery County: Wildcats deepened, but nothing of importance recorded. Atlantic Refining Co.'s Foster Lumber Co. A-1, Fostoria area, started coring 8948-58 ft, contents not revealed. Continental Oil Co.'s Frazer 1, east of Willis, drilling 8070 ft. Glenn McCarthy, Inc.'s Roscoe Seyle, Magnolia area, nearing expected Wilcox top below 7800 ft. H. C. Cockburn abandoned Cockfield test, Bender Estate 1, 5800 ft.

Lavaca County: Shell Oil Co.'s McManus 1, drilling below 10,500 ft, with some showings reported in the Wilcox. Shell's Neuhaus 1, south Provident City, drilling below Cockfield, showing oil reported, not confirmed.

Southwest Texas

LaSalle County Deep Well Now Proposes 12,000 Feet

Texana field in Jackson County has prospect of oil in an extension test. Deep hole in Lower Coast is a failure. LaSalle County well will go to 12,000 feet.

Lower Coast: Sinclair Prairie Oil Co.'s Volkmer 1, showing for first oil and extension of Texana field, Jackson County, 3120 ft west; perforated 5102-06 ft, flowed 25 bbls daily 25.1-gr oil, 3/32 choke, 1500 lbs tubing, 2000 lbs casing. Squeezed to cut off gas, waiting on cement.

Gulfboard Oil Corp.'s State 1, one of deepest in area, in San Antonio Bay, Calhoun County, abandoned 11,020 ft.

McSpadden Co.'s Clark 2A, second producer Colmena Creek, Calhoun County, flowed 115 bbls 53.5-gr distilliate, ⅛ choke, 1800 lbs tubing, 2200 lbs casing; plugged back from 8514 ft, perforated 5898-99 ft.

Sam E. Wilson and Gulf Plains Corp.'s Union Central 1, west outpost Stratton-Agua Dulce area, Nueces County, across fault had sands better and richer, 20 ft higher than main field; drilled 6192 ft, perforated 6658-81, 6700-26, 6734-70 and 6408-23 ft, producing gas and distillate.

Rowan & Hope's Piegsa 1, Blk 2, Range 1, Victoria field, Victoria County, opened new sand, 21 million gas, 1500 lbs rock pressure; sand 2900-20 ft, perforated 2902-10 ft, bottom 3052 ft.

S. E. W. Oil Corp.'s Land Bank 1, 1743 ft NE Union Producing Co.'s Harper 1, N. Agua Dulce, Nueces County, cored sand 5560-89 ft, dst 5560-71 ft rec 300 ft 42-gr oil, 45 lbs 10 min; dst 5571-89 ft 400 ft oil, 90 ft oily mud 28 lbs 10 min, set 5½-in on bottom and perf. Second oil well for field and north expansion.

Seaboard Oil Corp.'s Lane 1, Odem field, San Patricio, cored gas sand 5280-5305 ft, shale 5305-09 ft, oil and gas sand 5309-30 ft, set 5½-in cas 5930 and perf 5320-30 ft. Extends field 3500 ft NW, new sand.

Willacy County: Pan American Prod. Co.'s Burgess 1, 1 mile SW Willamar field, Willacy County, perf 7945-55 ft, flowed 160 bpd ⅛ 750 lbs tubing, 1850 lbs casing pressures, made some water and squeezed. Extending field.

LaSalle County: Quintana Petroleum Co.'s Washburn 3-A, Washburn field, to go least 12,000 ft. Washing over and attempting to drill out cement to pull 5-in set 6020 ft. Hole bottomed 11,042 ft in lime.

McCurdy et al's Lupe 1, topped Wilcox high and coring below 4700 ft. All sands so far thin but carry gas and oil odors. Well 14 mi ne Artesia.

Louisiana Gulf Coast

Plaquemines Parish Wildcat Shows Well on Potential

Plaquemines Parish wildcat given potential; Pine Prairie outpost to sidetrack.

Plaquemines Parish: Phillips Petroleum Co.'s discovery, 45,000-acre block, Bastian Bay prospect, 13½ bbls 35.5-gr oil hour on potential; 5/32-in choke, tubing pressure 2450 lbs, casing sealed; bottomed 10,710 ft, casing 10,000 ft, perforated 9350-53 ft; gas/oil ratio 2010/1.

Evangeline Parish: Pan American Production Co.'s deep test north Pine Prairie production, drilled 9506 ft, Cockfield too low, only slight trace oil at top; to sidetrack west toward dome from 5000 ft.

Scattered Wildcats: Joe Humphreys, Tr.'s Frazee 1, Center Point prospect, Avoyelles Parish, electric log 6500 ft, slight kick at bottom. W. T. Burton's Calcasieu National 1, Oberlin prospect, Allen Parish, drilling 10,260 ft. Gulf Refining Co.'s Petite Anse 2, Sec. 25-13s-5e, Avery Island, Iberia Parish, building roads; 2 miles southwest No. 1, abandoned 12,063 ft without reaching salt. Phillips Petroleum Co.'s Fitzsimmons 1, southwest outpost, Erath field, Vermilion Parish, testing deep sands.

North Louisiana

Three Large Gas Wells Among Week's Completions

Two gassers completed in Sligo field, Bossier Parish, and one in Logansport-Joaquin field, DeSoto Parish; 64 active operations on Olla trend, including 47 in 5 LaSalle Parish Wilcox fields; shallow tests planned near Zwolle.

Gassers: Two of largest gassers ever completed in territory brought in at Sligo, Bossier Parish, both in basal Glen Rose (Pettet), and both by Union Producing Co.; Roscoe A-1, near C

NW 14-17n-12w, 200 million ft, 5150 ft; 5000 gals acid; Kerr C-1, near C NW 24-17n-12w, 166 million ft, 5100 ft.

In Logansport - Joaquin Glen Rose lime wet gas field, DeSoto Parish, Southern Carbon Co.'s Price 1, 14-11n-16w, 105 million ft, total depth 4917 ft.

Olla Trend: Sixty-four active operations stretching across Louisiana, including 47 in 5 LaSalle Parish shallow Wilcox pools and 17 wildcats.

Zwolle: Southwest of Zwolle, Township 7 north, Range 13 west, Sabine Parish, Hunter Co. leased 1200 acres Sabine Lumber Co. land for a series shallow chalk rock tests; holes to be taken to the Zwolle chalk 2000 to 2400 ft.

Mississippi

Tinsley Edge Test Opens New Stray Sand

Tinsley Dome operators voluntarily reduced daily production per well to 350 barrels from first reduction to 500 barrels; Tinsley Dome added stray Eutaw-sand producer.

Tinsley Dome: Tinsley Dome operators agreed to further reduce daily production, this time to 350 barrels daily per well, previously having agreed to reduce to 500 barrels daily. Union Producing Co.'s Powell 2, Sec 36-11n-3w, north edge test, stray sand in Eutaw (Ozan), 235 bbls fluid daily, 20 percent basic sediment, 30 percent salt water, perforated 5771-85 ft; sand apparently lensed.

Arkansas

New Macedonia Field Operations Up to Five

Two locations for new Macedonia field, Columbia County; new wildcat location LaFayette County; strikes halt five rigs.

Macedonia Field: Atlantic Refining Co. located R. S. Warnock 1, C N½ SW 13-18-21, and R. S. Warnock 2, C S½ NW 22-18-21, bringing operations to five.

LaFayette County: Wakefield Oil Co. spudded Baker 1, SE SE NE 13-17-20.

Albert Taylor leased wildcat block around Sec. 11-17-22, Columbia County; Eugene Goff leased 4000 acres around SEc 9-15-24 for Smackover lime test.

Michigan

Eastern States Deep Record Shattered by 10,378-Foot Hole

New eastern depth record set as test start coring St. Peter sand objective. New starts at year's high.

Deep Test: Gulf Refining Co.'s Bateson 1, Sec. 2-14n-4e, St. Peter 10,361 ft, cored 10,378 ft, 14-ft core, dense sand formation with green shale stringers. Gulf intends to drill or core entire sand section; if not productive, will plug to 7800 ft to test Salina gas-distillate pay.

Bateson 1 holds depth record for all states east of Mississippi River. Record previously held by Hope Natural Gas Company with test abandoned earlier this year Braxton County, West Virginia, 10,018 feet.

Reed City: Seventeenth Monroe producer completed in Reed City, Osceola County, pool. Recent mile extension boosted drilling operations to 31, plus 29 derricks and locations. New starts, mostly for Reed City, totaled 26 for an all-year high.

California

Rio Bravo Field May Be Defined on Northwest

Northwestern flank of Rio Bravo field, Kern County, has apparently been defined.

Kern County: Union Oil Co. of California's Pacific States No. 21-33, Rio Bravo outpost, Sec. 33-28-25, topped Rio Bravo 11,483 ft on ditch sample; taken 11,550 ft, last few cores showed gray sand and shale; logging device to be run.

Rincon Field: Chanslor-Canfield, Midway Oil Co. recompleted Hobson C-9, deep test, after redrilling to 9300 ft; 150 bbls daily rate, 26-gr, 485 ft is open to production, but sand of low permeability; more than 1300 ft of more porous formation above the interval tested blanked off behind the pipe; upper measure to be tested in a second well now drilling.

Continental Oil Co. was expected to announce abandonment of KCL-C-2, deep test Sec. 35-27-24, Shafter area, Kern County; bottomed 12,935 ft, gray sand, top Rio Bravo or Wasco sand 12,810 ft, was wet.

Seaboard Oil Co.'s Hagood 2, wildcat Sec. 6-17-13, Ciervo area, Fresno County, cored gray sand and shale upper Panoche 4500 ft, abandoned. Consideration being given to staking another location in area.

Rocky Mountain Area

Southwest Wyoming Test Promises Gas Field

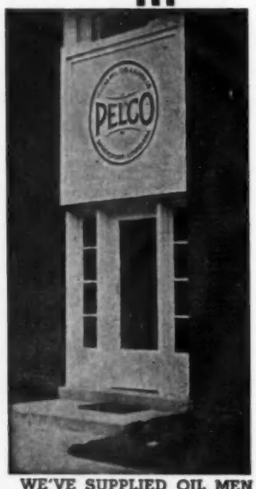
Revival of Eastern Colorado plains play further indicated by deep test in Kit Carson district, Cheyenne County. Promise of new gas field for southwestern Wyoming.

Cheyenne County: Elmer E. Whitson let rotary contact to Torey Drilling Co. for Christian 1, NWc SE 12-13s-49e, Kit Carson area, Colorado plains, 4800-ft test to Kansas City lime; test ½-mile northeast Gulf Oil Corp.'s U. P.-Larsen 1, drilled 1938 to 6380 ft, abandoned after show in Kansas City 4810 ft. Whitson et al have 30,000 acres leased in area.

North Hiawatha: Vermillion Oil Co. and Johnson & Horton's Government 1, SW SE SW 6-12n-99w, first test North Hiawatha high, Vermillion Basin, Sweetwater County, Wyoming, 1 million ft gas upper sand Wasatch 1530 ft, drilling 1674 ft; major objective lower Wasatch sands 2600 ft. Second substantial gas flow for wildcat indicating closure of structure and existence of gas.

THE ARMY CALLS IT ALERT

We are now in the act of tightening our belt or girding our loins or whatever it is when you are about to do serious battle with circumstances. We can see from here that sales are going to be too easy and procurement too tough. It's a situation that could make for too much golf in the supply business. We're more interested in co-ordination and co-operation. It's not just the boys in the army who are going to do another 18 months.



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SHREVEPORT LOUISIANA

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Berwick
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UNITED STATES WELL COMPLETIONS

Company, Well and Location	Init. Prod. Bbls.	Depth
Arkansas		
Columbia County (Dorcheat)—		
C. H. Lyons, Henry 1, 15-18-22	155	8965
La Fayette County (McKamie)—		
Atlantic Ref., Bodcaw Lbr. Co. 6, 32-17-23	392	9360
Miller County (Fouke)—		
Carter Oil, Sturgis D-1, 12-17-27	*	3810
Union County (Smackover)—		
C. & D. Oil Co., Saxon 1, 4-16-16	*	2290
California		
Fresno County (East Coalinga Eocene)—		
Robert S. Lytle, No. 51-18F	1280	7810
Kern County (Coles Levee)—		
Richfield, KCL A-25-29	1060	9263
Kern County (Elk Hills)—		
Standard, No. 7-33S (pb 2800)	50	2993
Kern County (McClung Area)—		
Ohio, KCL G-1	*	10595
Kern County (McKittrick)—		
Otis Hoyt, Union 3	175	2461
Kern County (Mount Poso)—		
Signal O. & G. Co.-Dwight Vedder, V-S 1	*	2393
Kern County (Richgrove Area)—		
A. E. Dawson, No. 1	*	2653
Kern County (Strand)—		
Shell, Canal B-85-12	1578	8717
Tide Water, Strand KCL E-44-7	*	8872
Kern County (Ten Section)—		
Shell, KCL A-55-29	2580	8235
Los Angeles County (Dominguez)—		
Shell, Reyes 123	344	4255
Los Angeles County (Long Beach)—		
Shell, Alamitos 47	148	4975
Los Angeles County (Wilmington)—		
Continental Dev. Corp., LACFCD 20	330	3259
M. A. K. Pet Corp., No. 5	175	3740
A. D. Mitchell, Nelson 1	.5	3742
Pal-Mac Oil Co., Nielsen-Dunwoody 2	No Est.	3678
Union Pacific, UP 186	434	5409
Los Angeles County (Wilmington Torrance)—		
Silver Pet. Co., No. 2	No. Est.	3745
Santa Barbara County (Santa Maria)—		
Union, Bradley Lands 1-4	1420	4615
Squires 23	310	4040
Sacramento County Rio Vista)—		
Standard, Rio Vista State 2	No Test	4693
Superior, Larsen 1	¶9.793	4300
Ventura County (Ventura Avenue)—		
Shell, Taylor 142	130	7500
Colorado		
Rio Blanco County (Wilson Creek)—		
Texas Co. & California Co., Unit 6, nw ne se 27-3n-94w	200	6487
Illinois		
Bond County—		
Schwarz et al, Studebaker 1, se se sw 21-6n-2w	*	3206
Clay County—		
J. P. Washburn, Booner 1, c n½ nw sw 12-2n-7e	*	3085
Carl Robinson et al, Easton 1, nw sw ne 26-4n-7e	496	2326
Clinton County—		
A. W. Guson et al, Billhart 1, se nw se 22-1n-5w	*	3217
Crawford County—		
Nigara Oil Co., Frazier 1, nw ne se 30-7n-13w	6	953
Edwards County—		
Tide Water, Gawthrop 2, sw sw sw 7-1s-11e	313	3277
National Pet. et al, Crackle Hrs. 1, nw nw sw 5-2s-14w	*	3150
Fayette County—		
Frank Bridges, Fiscus 1, ne ne sw 21-4n-1w	*	1544
Sam Jarvi et al, Sinclair 1-D, n½ se nw ne 29-8n-3e	337	3080
Carter, Purtilar School 2, se sw nw 24-8n-3e	*	1670
Workman 3, se ne nw 24-8n-3e	*	1639
Dunaway 7-D, 3, ne ne 29-8n-3e	238	3019
Buzzard 3, ne se se 34-9n-3e	72	1528
Franklin County—		
J. A. Burhans et al, Viske 1, e½ ne sw 12-5s-3e	*	3292
J. H. Gilliam, Walker 1, s½ se se ne 23-6s-2e	164	2129
Menhall, Stalcup 8, n½ nw ne se 23-6s-2e	238	2112
Moore 7, n½ nw nw sw 25-6s-2e	230	2167
Gus Berry, Cummins 1, se se nw nw 24-6s-2e	*	2165
Shell, McKemie 3, s½ se se se 24-6s-2e	182	2173
C. W. F. Coal 13, s½ sw sw nw 36-6s-2e	440	2168
Wegner, C. W. F. Coal 1, s½ se se se 26-6s-2e	263	2150
D. Margrave, Bethel Church 1, nw nw ne sw 1-7s-2e	*	2150
Gallatin County—		
Sinclair-Wyo., Henson 1, nw ne sw 2-8s-9e	85	3000
J. H. Wall et al, Mossman 1, s½ nw sw 7-9s-8e	*	565
Hamilton County—		
Texas, Johnson 2, sw nw se 7-6s-7e	152	3029
Johnson 1, nw nw se 7-6s-7e	163	3033
Clark 5, nw ne sw 7-6s-7e	380	3019
Johnson 1, c w½ se nw 22-6s-6e	*	3355
Irwin 1, w½ sw se 27-6s-6e	548	3102
Shell, Dudley et al 2, sw ne sw 7-6s-7e	196	3034
Ventress 1, sw sw se 12-6s-5e	1158	3191
B. Fields, Kennedy 1, n½ ne nw 27-3s-5e	220	3314
Pure, Fairweather 2, ne nw sw 7-6s-7e	1750	3040
Jasper County—		
Wiser, Richards 1, nw se se nw 5-5n-10e	65	2837
Lain O. & G., Henry 2, nw nw nw 9-6n-10e	*	2855
Jefferson County—		
Bawder, Oldham 1, nw nw nw 12-1s-1e	*	2166
Nation Oil Co., Chesnik 1, sw nw se 26-6s-1e	*	2307
Magnolia, Shirley 1, nw nw se 35-2s-1e	710	1982
Kingwood, 1st Natl. Bank 3, n½ nw ne sw 35-2s-1e	388	1973
Gulf, Reynolds 1, e½ se ne 26-4s-2e	*	3057
Marion County—		
Texas, Kagy 1, s½ sw ne 7-2n-2e	*	2240
Shell, Adams 2, w½ sw sw se 7-3n-1e	11	1441
Adams O. & G., Merryman 23, se sw sw 21-4n-1e	18	1447
Piatt County—		
J. S. Feltus, Hopkins 1, ne nw ne ne 35-21n-6e	*	656
Richland County—		
Sinclair-Wyo., Legan 1, ne se sw 18-3n-14w	*	3394
Texas, Shan 1, e½ se nw 27-3n-9e	*	3100
Saline County—		
Compton et al, Hudgins 1, ne ne se 22-7s-5e	*	3295
Shelby County—		
Carter, Leach 1, se sw sw 5-9n-4e	*	2055
J. P. Babcock, Williams 1, sw se nw 7-10n-3e	*	1794

*Failures; †Junked; ¶Million cu. ft. gas.

[*Continued on next page*]

Summary of Drilling Operations in the United States, Week Ended August 23, 1941

	WELLS COMPLETED								*PERMITS FOR NEW WELLS				
		New Wells Drilled for Oil and Gas											
	Total for Week	Oil Wells	Gas Wells	Failures	†Miscellaneous	Initial Production	Total 1941	Total this Date 1940	This Week	Total this Month	Total 1941	Total this Date 1940	Year Total 1940
Alabama	.....	.....	.....	.....	.....	.....	1	3	.....	.....	118	.....	.....
Arkansas	4	2	.....	2	.....	547	109	124	5	13	.....	99	153
California	23	17	2	4	.....	10,089	770	741	27	69	749	703	1,042
Colorado	1	1	.....	.....	.....	200	11	5	.....	.....	.....	.....	.....
Florida	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Georgia	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
Illinois	87	60	.....	25	2	17,147	2,369	2,592	118	333	2,994	2,959	4,532
Indiana	25	12	2	11	.....	955	350	298	5	15‡	109	.....	.....
Iowa	.....	.....	.....	.....	.....	.....	5	.....	.....	.....	.....	.....	.....
Kansas	42	24	.....	18	.....	32,229	1,437	1,281	68	155	1,504	1,327	2,048
Kentucky	5	3	.....	2	.....	63	194	216	4	14‡	61	.....	.....
Louisiana	31	20	4	7	.....	3,914	915	1,104	28	115	1,138	1,099	1,658
Michigan	15	9	3	3	.....	6,269	518	819	26	55	558	744	1,093
Mississippi	4	4	.....	.....	.....	2,391	117	122	.....	.....	.....	.....	.....
Missouri*	.....	.....	.....	.....	.....	.....	36	13	.....	.....	9	4	26
Montana	11	8	1	2	.....	1,311	129	118	.....	.....	.....	.....	.....
Nebraska*	3	3	.....	.....	.....	670	59	8	2	10	66	7	69
New Mexico	8	7	.....	1	.....	1,279	235	466	6	22	271	413	559
New York	29	19	.....	.....	10	161	583	687	.....	.....	.....	.....	.....
Ohio	39	8	20	11	.....	562	1,061	595	.....	.....	.....	.....	.....
Oklahoma	39	22	2	14	1	3,910	1,376	1,413	44	167	1,445	1,213	1,888
Pennsylvania	70	46	12	3	9	48	2,383	2,461	.....	.....	.....	.....	.....
South Dakota	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Tennessee	.....	.....	.....	.....	.....	.....	7	8	.....	.....	.....	.....	.....
Texas	238	178	1	56	3	93,279	6,569	6,823	256	479	7,638	7,610	11,170
Utah	.....	.....	.....	.....	.....	.....	1	2	.....	.....	.....	.....	.....
West Virginia	19	7	11	1	.....	65	430	362	.....	.....	163	512	782
Wyoming	15	12	1	2	.....	3,042	86	99	.....	.....	.....	1	1
Total this week	708	462	59	162	25	178,131	19,752	20,367	589	1,447	16,823	16,691	25,021
Total last week	686	449	55	152	30	182,777	19,044	19,765	370	858	16,234	15,298	25,021
Total this year	19,752	12,277	1,467	4,338	1,670	5,551,403	.....	.....	.....	.....	.....	.....	.....

* This tabulation includes those states where weekly data are available; figures for Missouri date from August 10, 1940; Nebraska from August 3, 1940.
‡ No data available before June 14, 1941.
† Includes old wells deepened, water-intake, gas input, and salt water disposal wells.

United States Well Completions—*Continued*

ILLINOIS—Continued

St. Clair County—

C. A. Hacker, Hall 1, nw sw ne 28-1n-10w ... 12 522

Wabash County—

Omera Bros., Coleman 1, lot 10, 20-1s-12w ... 150 2043

Roberts & George, Smith 2, lot 232, 20-1s-12w ... 200 2455

E. O. Olds et al, White 1, se nw sw 21-1s-12w ... 141 2039

S. Yingling, Smith 2, sw ne ne sw 21-1s-12w ... 175 1989

Washington County—

Ameriagene, Inc., Erbes 1, se nw sw 10-1s-1w ... 96 1527

Cities Service, Poggenmoeller 1, sw nw se 10-1s-1w ... • 1534

Ohio, Poggenmoeller 3, nw sw se 10-1s-1w ... 24 1520

Wayne County—

Texas, Watson 1, n½ ne nw 34-1n-6e ... 1704 3044

Watson 2, c s½ ne nw 34-1n-6e .. 1037 3068

Leathers 1, s½ nw sw 27-1n-6e .. 5028 3032

Wiser Oil Co., Watson 2, c n½ nw ne 34-1n-6e ... 800 3063

J. W. Sanders, Hosselton 4, c w½ sw se 21-2n-8e ... 171 2647

Freeman Oil Co., Beaird et al 1, c e½ ne sw 22-2n-8e ... • 3130

Pure, Hosselton 3, nw sw ne 31-2n-8e ... 527 3030

Campbell 2, c e½ nw ne 33-2n-8e 133 3100

White County—

Wall & Mitchell, Kershaw 1-A, sw sw ne 22-3s-10e ... 118 2897

W. W. Grey, Lee 1, se nw sw 21-4s-14w ... 20 2866

Paul Miller, Ford 8-B, se nw nw 21-4s-14w ... 65 2987

Sinclair-Wyo., Donald 9, sw sw se 21-4s-14w ... 197 2962

Rudolph 12, se sw sw 12-6s-9e .. 112 2277

McKenzie 4, ne ne se 11-7s-8e ... 90 2758

Superior, Fitton 12, sw ne nw 20-4s-14w ... 210 2855

Fitton 17, sw ne ne 28-4s-14w .. 359 2980

Fitton 18, nw nw ne 28-4s-14w .. 359 2980

Tide Water, Dennis 28, c ne ne 34-4s-14w ... 160 2735

Denis 29, c sw ne 33-4s-14w 199 2735

Cherry & Kidd, Karch 1, se sw se 13-6s-10e ... 325 2026

Karch 2-A, ne se nw 24-6s-10e .. 215 2026

Karch 5, se se nw 24-6s-10e 124 2029

Arrow-Fisher, Mitchell 1-B, se sw nw 11-7s-8e ... 125 2175

Lewis Prod., Mitchell 4, sw ne sw 11-7s-8e ... 52 2186

C. D. Neff, Union Cen. Life 1, ne nw sw 10-7s-10e ... • 2990

GAS INPUT WELLS

Fayette County—

Carter, Giles-Miller 1-4, nw c se ne 1-8n-3e 1528

Wood 36-5, nw c nw sw 36-9n-3e ... 1544

OLD WELLS REWORKED

Hamilton County—

Ohio Oil, Grimes 2, sw nw nw 2-6s-6e (otd 3034) ... 136 3047

Marion County—

Magnolia, Young 96, sw nw sw 21-2n-2e (otd 3502) ... 20 4695

Young 103, se sw nw 28-2n-2e (otd 3502) ... 92 4684

Indiana

Daviess County—

R. D. Brown, Inc., McCracken 3, c n½ ne ne 21-2n-6w ... ¶0.3 735

J. W. Cannon, Evans 9, e½ ne se ne 8-2n-5w ... 19 607

Swartzentruber et al, Beck 1, se sw ne 8-2n-5w ... 15 639

D. L. Norris et al, Adams 1, ne se sw 35-2n-5w ... • 505

Decatur County—

Hoosier Pub. Util., Tichenor 227, c sw se 15-9n-9e ... ¶0.18 911

Elkhart County—

A. W. Downs, Carl Est. 1, ne ne sw se 11-38n-4e ... • 655

Gibson County—

R. D. Brown, Inc., Bailey 1, nw nw se 10-2s-12w ... • 2458

Warren & Bradshaw, Reavis 1, sw nw ne 24-2s-10w ... • 2047

Papoose Oil, Cooper "A" 19, sw sw se 13-3s-14w ... 205 2525

Continental Oil, Bozeman Land 45, nw sw sw 23-3s-14w ... 110 2843

Keck 27, sw ne se 27-3s-14w .. 58 2883

Knox County—

C. L. Wingate, Met. Life Ins. 1, 27-1n-11w ... • 2038

Midwest Devel. Co., Schaller 1, se se se 23-2n-11w ... • 1903

Posey County—

Continental Oil, Kleiderer 10, sw nw ne 33-3s-14w ... 216 2897

Tide Water, Doll 13, sw nw se 33-3s-14w ... 75 1860

Leon Wintner, Keck 2, ne ne nw 34-3s-14w ... 33 2811

Cherry & Kidd, Gray, Trs. 2, ne nw nw 2-4s-14w ... 110 2857

Herndon Dr., Ford 1, se ne ne 6-4s-13w ... • 2504

Gulf, Slygh 1, se nw se 23-6s-13w .. 44 2527

Paul Rossi, Siefert 1, nw nw se 19-6s-12w ... 36 2385

Basin Dr., Heil 1, nw sw ne 12-7s-12w ... • 1934

Sun, Renwick Prop. 2, nw ne nw 12-7s-12w ... 34 1914

R. B. Martin, Keck 1, se se ne 23-8s-15w ... • 2909

Randolph County—

David Culpepper, Lewis 1, sw sw se 9-19n-13e ... • 1330

Spencer County—

King, Peoples Saving 1, se ne nw 7-7s-7w ... • 1093

Kansas

Barton County—

Black-Marshall, Schneweiss "A" 1, c n½ ne se 7-17-11w ... • 3399

Magnolia, Grosshardt "A" 2, c n½ nw nw 9-17-11w (pb 3306) 142 3312

Branine & Holl, Rexroot 1, c e½ ne se 22-17-13w ... • 3500

Bishop, Johanning 1, c e½ se ne 29-19-11w ... • 3370

Falcon-Seaboard et al, Burchart 1, c n½ se ne 14-20-11w ... • 3340

Shell, Kowalsky 3, sw se se 18-20-11w ... 3000 3297

Butler County—

National Ref. Co., Newby 1, swc 16-26-7e ... • 3223

Adair-Morton, Piper 1, ne nw ne 36-29-4e ... • 2870

Cowley County—

Stelbar, Joslin 2-A, nw sw ne 21-30-4e ... 440 2825

Ellis County—

Champlin, Mock 2, se nw sw ne 17-11-17w ... 267 3359

Cities Service, Collahan "B" 6, ne c nw 25-11n-7w ... 3000 3429

Shell, Lynn 1, nec se 14-11-18w .. 3000 3362

Lion O. & R. Co., Miller 1, c s½ sw sw 17-13-17w ... • 3737

Ellsworth County—

Herndon Dr. Co., Jezek 1, c e½ se se 7-16-10w ... 232 3375

Cities Service, Schroeder "A" 11, sw nw nw 29-17-9w ... 384 3230

Greenwood County—

I. Katz et al, Christy "A" 2, c w½ se ne 12-26-9e (pb 1383) ... 12 2200

Bay, Ellingston 1, swc se 8-28-11e • 1273

Jefferson County—

Magnolia, Kell 1, c ne se 4-10-10e • 1643

Leavenworth County—

E. V. Jackson et al, Fevurly 1, c sw se 1-9-20e ... • 1501

Marion County—

Ring-Mac, Kaiser 2, c e½ nw se 33-17-4e ... 300 2416

Phillips County—

Cities Service, Pinkerton 1, sw se ne 31-5-20w ... 1088 3618

Reno County—

Landon, Union Central 4, c s½ sw nw 7-24-10w ... 2295 3750

Rice County—

Bay, Grizzell 3, sw se nw 8-19-9w .3000 3260

McPherson Dr. Co., Grizzell "B" 2, nw sw ne 8-19-9w ... 3000 3237

Mabee O. & G. Co., Miller 3, c e½ nw ne 9-20-9w ... 610 3232

Stormfeldt & Hyde, Specht 3, c e½ nw sw 16-20-10w ... 3000 3147

Rush County—

Morgan, Flynn et al, Schroeder 3, c e½ nw se 23-18-16w ... 761 3547

Russell County—

C. E. Liggett, Hines 1-B, sw ne nw 16-11-15w (pb 3340) ... 150 3453

Ruso Dr. Co., Phillips 1, se ne ne 6-14-13w ... • 3334

H. H. Blair, Foster 1, c s½ se se 33-15-11w ... 230 3008

Central, Gustason 1, c s½ se nw 14-15-12w ... 163 3257

Braden & McClure, Resner 1, se sw nw 23-15-14w ... 86 3399

Cities Service, Krug "D" 7, sw nw se 24-15-14w ... 1069 3343

Anderson-Prichard, Michaelis 1, c w½ nw se 27-15-14w ... • 3395

Stafford County—

Stanolind, Helmers 2, c n½ sw sw 1-22-12w ... • 3638

Kirkpatrick 4, c e½ nw nw 15-24-11w ... 3000 3834

Shell & Atlantic, Hildebrand "A" 1, ne nw nw 33-23-11w ... • 3762

Cities Service, Benton 5, c s½ nw sw 23-24-13w ... • 4160

Elbar, Curtis 1, nec 18-25-13w .... • 4325

Trego County—

McKnab et al, Mattke 1, c w½ nw nw 17-12-22w ... • 4150

Woodson County—

Chas. Hadlik, Woolner 1, se ne ne ne 33-25-14e ... • 1534

OLD WELLS DEEPENED

Stafford County—

Stanolind, Hays 5, c s½ nw se 11-24-11w (otd 3765) ... 3000 3800

Kentucky

Ohio County—

Mecca Oil, Wells 32, 5-M-32 ... • 1046

Roscoe Evans et al, Smith 1, 10-M-34 254

W. Wilkins et al, Westerfield 2, 25-N-31 ... 50 60

DeHart et al, Phillips 2, 22-0-33 .. 11 422

OLD WELL DEEPENED

Ohio County—

O. D. Vickers, Downs 8, 1-N-34 (otd 100) ... 2 337

North Louisiana

Bossier Parish (Sligo)—

Union Prod. Co., Kerr C-1, 24-17n-12w ... ¶166 5100

Roscoe A-1, 14-17n-12w ... ¶200 5150

Bossier Parish (Bellevue)—

Premier Invest. Co., Wyche 51, 14-19n-11w ... 20 430

Caddo Parish (Pine Island)—

C. C. Crews, Stiles 4, 33-21n-16w .. 50 1862

Hyman Ginsberg, Ark. Fuel 1, 35-21n-16w ... 10 2285

Texas Co., Caddo Levee Bd. 54, 22-21n-15w ... 65 1618

Claiborne Parish (Wildcat)—

Crow Dr. Co., O'Bannon 1, 30-22n-4w ... • 5431

De Soto Parish (Logansport-Joaquin)—

Southern Prod. Co., Price 1, 14-11n-16w ... ¶105 4917

Grant Parish (Wildcat)—

H. L. Hunt, Goodpine F-1, 12-8n-2w • 6002

La Salle Parish (Nebo-Jena)—

H. L. Hunt, Goodpine C-4, 28-8n-3e 25 3638

Goodpine F-52, 9-7n-3e ... 160 4137

La Salle Parish (Olla)—

Ark. Fuel Oil Co., Neugent B-3, 24-10n-2e ... 275 2255

H. L. Hunt, Goodpine F-32, 19-10n-3e ... 240 2392

Placid Oil Co., La. Central Lbr. 103, 3-9n-2e ... 175 2423

La Salle Parish (South Olla)—

Placid Oil Co., Goodpine B-5, 27-9n-2e ... 125 2886

Natchitoches Parish (Ajax)—

Edman Pet. Co., Tanner Est. 1, 13-10n-11w ... ¶10 3209

G. H. Neighbors, King 1, 12-10n-11w ... • 3230

Natchitoches Parish (Wildcat)—

Rhodes & O'Mara, Prudential Life 1, 36-11n-10w ... • 6022

South Louisiana

Cameron Parish (Chalkley)—

Shell, Hanszen ... 341 10155

Cameron Parish (E. Hackberry)—

Harrison & Abercrombie, Breaux 1 900 7238

Evangeline Parish (Villa Platte)—

Continental, Ed Tate-Adam Tate Unit 27 ... 159 10042

Iberville Parish (Wildcat)—

Congo O. Co., Dreyfuss 1 ... • 10024

Jefferson Davis Parish (Woodlawn)—

Union Sulphur, Racca 2 ... 228 8950

Calcasieu Parish (Wildcat)—

Pan American, Louisiana Farm & Livestock 1 ... • 10411

La Fourche Parish (Golden Meadow)—

Brownwoods O. Corp., Lefort 4 ... 127 5215

Texas Co., State Catfish Lake 14 .. 73 2900

La Fourche Parish (Raceland)—

Amerada & LL&E, South Coast 5 .. 135 7190

Plaquemines Parish (Stella)—

California Co., Manning Oil lse No. 2 No. 1 ... ¶4.35 & 36 10100

California Co., Delta Minerals lse 5 No. 2 ... 308 10345

Plaquemines Parish (West Bay)—

Gulf, Gulf-Tide Water 3 ... 462 7335

St. Mary Parish (Belle Isle)—

Sun, State 1 ... • 7954

Michigan

Bay County—

Chapman Oil Co., Schultz 1, sw nw nw 2-14n-4e ... 30 2870

L. C. MacGregor, Staudacher 1, nw sw nw 2-14n-4e ... 25 2871

United Driller, Kircher 5, ne se ne 3-14n-4e ... 40 2868

Clare County—

Sun Oil, Thayer 4, c w½ ne sw 29-20n-6w ... 40 3160

Thayer 6, c e½ ne sw 29-20n-6w .1800 3747

Pure Oil Co., Egts A1, c e½ nw nw 32-20n-6w ... 252 3150

Isabella County—

Belvidere Oil Co., Smith 1, nw nw sw 22-13n-5w ... • 1275

United States Well Completions—*Continued*

Company, Well and Location	Init. Prod. Bbls.	Depth
Mason County—		
Merrill & Dean, Young 1, se nw sw 9-17n-15w	¶.12	3303
Osceola County—		
Taggart Bros. Co., Moore 23, c e½ 18-19-18n-10w	¶14.0	1199
Fry 1, c s½ 6-18n-7w	•	1570
Gulf, Jewett 1, c n½ se ne 31-18n-10w	1800	3590
Jewett 2, cs½ se ne 31-18n-10w	682	3593
Pure Oil, Jewett 1, nw nw se 31-18n-10w	1600	3637
Turner Pet. Corp., Gas Unit 1, sw ne ne 7-18n-7w	¶1.75	1527
Otsego County—		
Belvidere Oil Co., Zembecki 1, c sw 25-31n-3w	•	1167

Mississippi

Yazoo County (Tinsley Dome)—		
E. C. Johnston et al, Hennis B-1, 36-10n-3w	486	5070
Magnolia, Payne 4, 36-10n-3w	1085	4710
Sinclair Prairie, Sorrels 3, 29-10n-2w	685	5094
Union Prod. Co., Middleton 4, 36-10n-3w	135	4780

Montana

Glacier County (Cut Bank)—		
C. Jeffries, Tribal 1-201, ne se ne 30-32n-5w	1100	2852
Santa Rita O. & G., Jacobsen 2, se nw 23-37n-5w	77	2605
Garfield County (Mosby Dome)—		
California Oil, Charles 4, se nw 21-15n-30e	•	5705
Hill County (Signal Butte)—		
Yale Oil Corp. & A. Cobb, Govt. 1, csw ne 19-37n-15e	•	4341
Toole County (Kevin-Sunburst)—		
Adlon Oils & Mines Co., Ward 2, sw sw ne 29-35n-3w	5	1735
Big West Oil Co., Ellingson 8, cse sw 14-35n-3w	20	1650
Dakota Montana Utilities, Govt. 20, sw sw 31-35n-1w	10	1641
Endfield Oil Co., Zachor 4, se nw nw 20-35n-1w	14	1600
Imperial-Craig, Martin 5, sw sw 18-35n-1w	75	1633
Montana Dakota Utilities, Schmidt 321, cse se 20-34n-1w	¶2.5	1280
Nepstad Oil, Hugi 2, se nw 11-35n-3w	10	1844

Nebraska

OLD WELLS DEEPENED

Richardson County—		
Ohio, Bucholtz 3, se nw sw 17-1n-16e (otd 2225)	150	2291
Harry Harper et al, Selbbernson 4, sw nw nw 20-1n-16e (otd 2262)	420	2302
E. J. Shaffer, Sandrock 3, nw sw nw 20-1n-16e (otd 2270½)	100	2285

New Mexico

Eddy County—		
Comanche Dr. Co., Berry 16, ne sw se 24-17s-27e	15	447
Emperor Oil Co., Puckett 3-B, c sw se 24-17s-31e	120	3967
Franklin Pet. Co., Coppedge 3-A, c n½ ne nw 5-18s-30e	462	2866
Eddy County (Wildcat)—		
Nick Manetas et al, Lane 1, c se ne 13-21s-28e	•	3030
Lea County (Arrowhead)—		
Continental et al, State 12-J-2, c e½ nw nw 2-22s-36e	42	3850
Lea County (Hobbs)—		
Samedan Oil Co., Byers 3, nw ne 3-19s-38e	360	4234
Lea County (Maljamar)—		
A. H. Hover et al, State 2	130	4002
Lea County (Skelly)—		
C. E. Willingham et al, Glier 2, ne nw nw 33-22s-37e	150	3681

New York

Allegany County—		
Trio Oil Co., Wetherby farm, Bolivar	15	1357
B. & B. Oil Co., Curtis farm, Bolivar	9	1370
J. A. Bucher, Hamsher farm, Bolivar	7	1367
South Bolivar Oil Co., McKelvey farm, Bolivar	8	1426
Messer Oil Corp., Shaner farm, Bolivar	10	1454
C. H. Christman & Son, Underwood farm, Scio	8	1229
Ebenezer Oil Co., Emerson farm, Scio	7	1083
Triangle Oil Co., Hixon farm, Alma	10	1435
L. H. Richardson et al, Scott farm, Alma	8	1528
Hardy & McBride, Garthwaite farm, Alma	14	1289
Bradley Prod. Corp., Monder farm, Alma	7	1367
Otsquago Corp., Pike farm, Alma	9	1432
Albert Oil Co., Witter farm, Scio	10	1046
Wilbart Oil Co., McDermott farm, Bolivar	8	1356
Marsh Oil Co., Hamilton farm, Greenwood	8	1278
L. H. Thornton et al, Cornwell farm, Willing	5	1131
Carl Oil Co., Harris farm, Amity	5	778
Otto Oil Co., Bartlett farm, Bolivar	7	1286
Sloan & Zook Co., Ramsell farm, Bolivar	6	1368

WATER INTAKE WELLS

Allegany County—		
J. A. Bucher, Hamsher farm, Bolivar	...	1338
V.V.V. Franchot, Murphy farm, Bolivar	...	1380
Putnam Oil Co., Birtoil farm, Wirt	...	1426
Messer Oil Corp., Miles farm, Bolivar	...	1474
Central Oil Co., Holtum farm, Scio	...	1130
Curt Oil Co., Williams farm, Bolivar	...	1364
J. P. Herrick No. 2, Howe farm, Bolivar	...	1430
Hopkins, Short Bros. et al, Clark farm, Independence	...	1079
H. W. Patterson et al, Stebbins farm, Scio	...	776
L. H. Richardson et al, Alger farm, Scio	...	854

Ohio

Ashland County—		
Ohio Fuel, Raubenolt 1	•	3047
Ashtabula County—		
Ohio Oil Co., Metcalf 1	•	2930
Athens County—		
Ohio Fuel Gas, Dwyer 1	¶.04	1622
Cromwell et al, Milliron 1	¶.15	1722
D. T. Orndoff, Sugar Creek Coal 1	¶.1	1310
Carpenter Bros. Fee 1	½	117
Carpenter Bros. Fee 2	½	145
Cuyahoga County—		
Obermiller Bros., Sailly 1	¶1.22	2633
Gallia County—		
B. U. Gas, Elliott 1	¶.01	1598
Guernsey County—		
George Jewell, Ratliffe 1	•	1815
Holmes County—		
A. F. Bryan et al, Croskey 1	¶.07	608
Jefferson County—		
R. J. Braden, Hutterly 1	½	1582
Knox County—		
Knox Exploration, Kemp 1	•	2800
H. E. Perkins, Harris 1	•	2805
Ohio Fuel, Fry 1	•	2796
Lawrence County—		
Ohio Fuel, Forgey & Templeton 1	¶.2	2480
Licking County—		
Ohio Fuel, Merrill 1	¶.94	2637
Ambruster & Stricker, J. R. Davis 5	10	645
Lorain County—		
Ohio Fuel Gas, Coley 2	•	2348
Medina County—		
Harry Dempsey, Porter 1	¶1.0	3573
Preston Oil, Broadsword 1	•	470
Meigs County—		
Guy Swadley et al, fee 2	¶.2	739
H. M. Nelson, Wood 2	•	943
Monroe County—		
Leonard Hines et al, Stoffle 1	¶1.0	1103
Morgan County—		
W. S. Harris, Doan 1	•	1024
Penn Cont. Co., McInturf 1	¶.05	1387
Muskingum County—		
Ohio Fuel Gas, Morrison 1	¶.41	4037
Noble County—		
H. G. Clymer et al, Danford 1	.05	1624
Ohio Fuel, Law 2	.06	1711
Perry County—		
Preston Oil, Thompson 2	333	3325
Randolph 5	40	3253
Industrial Gas, Rhodes 2	175	3342
Stark County—		
Lyons et al, Bachtel	¶3.9	4825
Summit County—		
Wiser Oil, Racek 1	•	3525
Tuscarawas County—		
Nat. Gas Co. of W. Va., Lebold 1	¶.8	4626
Washington County—		
Peaker et al, Delong 1	1	200
Campbell et al, Vickers 1	¶.07	1539
Ohio Fuel, Tresch 6	¶.15	1153
Wayne County—		
Kemrow Co., Musser 1	¶.02	3077

Oklahoma

Caddo County—		
S. D. Butcher, Davis 1, sw se ne ne 1-5n-10w	498	3441
Pace, Walker 1, ne ne sw ne 1-5n-10w	585	3406
Carter County—		
Hubbard & Minett, Bonner 1, ne ne nw 17-3s-2w	•	242
Bonner 2, se ne nw 17-3s-2w	•	200
Kyle, Daugherty "A" 6, se se sw sw 17-4s-2w	357	2232
Comanche County—		
Ashcraft, Fee 17, nw nw se nw 28-2n-10w	•	470
Creek County—		
Devonian, Hamilton 3, nwc ne 5-14n-7e	30	2832
Wilcox, Soaktey 1, se sw sw 26-14n-7e (pb 3235)	50	3615
Bryan, Stephney 2, se nw nw 35-14n-7e (pb 3189)	¶4.5	3987
Bruin, Cruce 1, nec se 28-14n-10e	90	3277
Shell, Bunyard 1, nec se 31-15n-7e (pb 4014)	26	4115
Bunyard 3, sw ne ne 31-15n-7e	36	2903
Bunyard 4, ne se se 31-15n-7e	23	2881
Beal et al, Murry 1, sec nw 12-16n-7e	•	3768
L. B. Jackson, Bruce 2, ne se ne se 4-17n-9e	8	2058
Grady County—		
Geo. Wray, Patterson 1, ne se sw se 21-3n-5w	20	2403
Hughes County—		
R. R. Crawford, Buck 1, swc ne 20-9n-10e	•	3400
Jefferson County—		
B. L. Fain, Owens 1, c ne se 7-5s-8w	•	2202
Lincoln County—		
Dunnett, Brown 1, nwc sw 17-15n-4e	•	5080
Kay County—		
Zephyr, Gingerich 1, swc se 29-28n-1w	•	3681
Logan County—		
Sinclair-Prairie, Sult 2, se sw ne 7-17n-1w	539	5461
Olson et al, Faulke 1, c n½ ne se 33-18n-3w	•	6417
McIntosh County—		
McNutt & Young, McNac 2, sw ne sw 1-12n-16e	¶4.5	1860
Muskogee County—		
J. Paul, Fewel 1, se sw 3-13n-16e	•	1816
Okfuskee County—		
Doak & Hughes, Low 6, nw ne ne 16-10n-11e	10	2089
Summit Dr. Co., Hildebrand 3, nw ne se sw 18-10n-11e	405	2195
Oklahoma County—		
Big Chief, McManus 1, nw sw se sw 22-12n-3w	350	6538
Sunray, State 15, nw sw ne nw 27-12n-3w	303	6556
Osage County—		
Heald et al, 26, ne nec 17-29n-12e	•	1486
Blackwell, 14, ne se nw sw 3-28n-11e	40	948
Pawnee County—		
Ed C. Lee et al, Sargent 4-A, nec 25-20n-9e	•	2500
Payne County—		
T. N. Berry et al, Fee 1, nw ne sw 13-18n-3e	110	4103
Pontotoc County—		
Glen Norville, Luce 1, c se se 23-5n-6e (pb 1850)	7½	1893
Pottawatomie County—		
Mid-Continent, Krouch 1, nw ne se 26-9n-4e	137	4435
Seminole County—		
Case & Johnson, Burkey-Swan "B" 3, sw ne sw 3-5n-5e	264	2662
Stephens County—		
Stogner, Bush 2, sw se sw 3-2s-8w	•	1555

OLD WELLS DEEPENED

Creek County—		
R. B. Wright, Meyers 15, nw nw ne nw 24-17n-10e (otd 1872)	•	1895
Jackson County—		
Altus, Maud 2, sw nw ne 15-1n-20w (otd 1501)	21	1569

WATER INPUT WELL

Pawnee County—		
Phillips Pet., Veeser 1, swc se 24-20n-9e	...	832

Pennsylvania

BRADFORD DISTRICT

J. W. Coast, McCaffrey & Coast	½	...
Martiny & Geise, Louser	½	...
Messer Oil Corp., Redfield	1½	...
Forest Oil Corp.	1	...
Forest Pet. Corp., 2 wells	2	...
Niagara Oil Corp., 5 wells	5	...
Bradford Tr. Co., 31 wells	31	...
Esther Oil Co., Lamton	1	...
Andrus, Lens & Daggett, Newton	2	...
D. W. Daly No. 2, Bing 467-484	1	...
Water Intake Wells		
Mix Creek Oil Co., Fee	...	...
Forest Oil Corp., 2 wells	...	...
Forest Pet. Corp.	...	...
Niagara Oil Corp., 3 wells	...	...
Esther Oil Co., Lamton	...	...
M. Hungiville, McCullough	...	...
MIDDLE DISTRICT		
United Nat. Gas Co., Powell	¶	...
Alum Rock Gas Co., Griswold	¶	...
Titusville Tr. Co. & Fleming, Lot 3192	½	...
BUTLER-ARMSTRONG DISTRICT		
Graff-Kittanning Clay Prod. Co., Graff	¶	...

[*Continued on next page*]

United States Well Completions—*Continued*

PENNSYLVANIA—Continued

SOUTHWEST DISTRICT

Company, Well and Location	Init. Prod. Bbls.	Depth
Armstrong County—		
Equitable Gas, McIntire 2	¶.06	3335
L. L. Livingood, Baker 1	¶.03	3367
T. W. Phillips, Clark Coal Co. 1	¶.03	2828
Clarion County—		
New Bethlehem, Bartlett 2	¶.14	1475
T. W. Phillips Gas & Oil, Hines 1	¶.08	3331
Fayette County—		
Boyd, Smith 1	*	2480
Duquesne Gas, Keefover 4	*	2462
Greene County—		
Equitable Gas, Hathaway 1	¶.03	3067
Carnegie, Rice 12	.75	3200
Indiana County—		
T. W. Phillips Gas & Oil, Bothel 1	*	3237
Jefferson County—		
T. W. Phillips, Smith 1	¶.05	3005
Washington County—		
Equitable Gas, Barr 1	¶.78	1804

Texas Panhandle

Company, Well and Location	Init. Prod. Bbls.	Depth
Gray County—		
Baldridge Oil Co., Davidson 3	113	3110
Coronado Oil Co., Davidson 3-B	214	3140
Garber & Fagan, Lovett 1	74	2915
Magnolia, Saunders 8-B	186	2893
Sinclair Prairie, Coomley 9	205	3200
Skelly Oil, Schafer 129	444	3275
S. & M. Oil Co., Worley 12	52	3268
Stanolind, Merten 18	43	3333
W. H. Taylor et al, Fee 1	124	2884
Tharp & Dawson, Hood 2	200	3068
Hutchinson County—		
J. M. Huber Corp., Weatherly 14-A	720	3000
Phillips Pet. Co., Cockrell 75	189	2935
Lizzie 5	148	3255
Shell, Harvey Sisters 26-B	337	3076
Stanolind, Terry 26	210	2984
Wheeler County—		
H. L. Guild et al, Walker 1	150	1993
Smith Bros. Ref. Co., Johnson 11	35	2111

East Texas

Company, Well and Location	Init. Prod. Bbls.	Depth
Joiner Area—		
J. L. Collins et al, Pinkston 13	960	3636
Sun Oil, Schuler 12-B	400	3710
Kilgore Area—		
Bay Oil Corp., Godfrey 6	3200	3574
Gross & Shulman et al, Walker-Sun 4	*	3817
Ed Pace Tr., Elder 15	500	3570
T. S. Schroeder et al, King 3	2400	3592
Texas Co., Dickson 14	1500	3564
Longview Area—		
Magnolia, Todd-Stinchcomb 19	3600	3560
T. S. Schroeder et al, Bumpas 9	2000	3580
Shell, Hampton 32	1500	3732
Stanolind, Davis 9	1200	3548
S. G. Maud Smith 14-B	2000	3526
Sun, McKinley 17	1500	3666
Anderson County (Cayuga)—		
Carter-Gragg Oil Co., McMahon 3	192	4011
Anderson County (Long Lake)—		
Tex Harvey Oil Co., Cartmel 4	103	5417
Angelina County—		
S. D. McDaniels et al, Bonner 1	1	1225
Franklin County (Talco)—		
Humble, Penn-Humble 30	504	4283
Madison County (Wildcat)—		
Leon Dunn et al, Jackson 1	*	3643
Henderson County (Wildcat)—		
A. J. Tyler et al, Dozier 1	*	3770
Rusk County (New Salem)—		
M.D. Bryant et al, Evans 1-B	*	4147
Wood County (Hawkins)—		
Humble, B. F. Allen 1 (11/100-ac)	411	4828

Texas Gulf Coast

Company, Well and Location	Init. Prod. Bbls.	Depth
Chambers County (Anahuac)—		
Humble, Middleton 58	377	7230
Chambers County (Oyster Bayou)—		
Sun, Jackson et al 4	660	8290
Chambers County (Red Fish Reef)—		
Humble, Galveston Bay State A-22	164	8710
Chambers County (Turtle Bay)—		
Stanolind, White 3	92	6620
Colorado County (W. Garwood)—		
W. R. Davis, Inc., Brownson 5-A	234	6150
Galveston County (League City)—		
Phillips Pet., Wilson 11	192	8750
Harris County (Wildcat)—		
McDannald O. Co., Penn (Oates) 1	*	...
Harrold Taylor, Swilley 1	*	4970
H. C. Tyrrell, Dixon 1	*	4119
Harris County (Goose Creek)—		
Newton & Lillie, Busch hrs 2	91	2002
Jefferson County (Wildcat)—		
Humble & Shell, Gallier 1	*	8281
Jefferson County (Lovell Lake)—		
Humble, Jefferson Ld. Co. 1-B	61	7813
Lee County (Wildcat)—		
J. F. Camp & Son, Harden 1	*	2254
Matagorda County (Old Ocean)—		
Harrison & Abercrombie, Armstrong 1	423	11032
Montgomery County (Wildcat)—		
H. C. Cockburn, Bender Est. 1	*	5900
Orange County (Wildcat)—		
Superior O. Corp., E. Beaumont Townsite Co. 1	*	7010
Orange County (Port Neches)—		
Texas Co., Stark 13	309	3495
Walker County (Wildcat)—		
Mike Hogg et al, Gibbs & Wynn 1	*	7966
Wharton County (Hillje Field)—		
Texas Co., Peters 4	78	5238
Wharton County (Withers)—		
Texas Co., Pierce Est. B-77	59	5549
Washington County (Wildcat—Workover)—		
Mount Selman O. Co., Fuelberg	*	6005

North Texas

Company, Well and Location	Init. Prod. Bbls.	Depth
Archer County (Griffin-Kadane)—		
Jack E. Kadane, Tr., Griffin 1-F	*	4484
Archer County (Hull-Silk)—		
Sinclair Prairie, Jones 4	*	3810
Archer County (K-M-A)—		
H. A. Schaeffer Oil Co., Ferguson 7	612	3892
Archer County (Wildcats)—		
W. T. Hutcheson Jr. et al, Wilson-McCrory 1-F	*	1575
Ted A. Norwood et al, Wright 1	*	1455
Archer County—		
Bridwell Oil Co., Falls County 3-D	71	1147
King Oil Co., Wilson 28-B	10	1526
Perkins-Prothro Co., Farmer 1-A	*	1536
Pet. Producers Co., Koester 8	*	1157
Young & Woody Dr. Co., Roberson 4	36	1399
Clay County (Antelope)—		
Shell, Mullens 6	648	3240
Clay County (Wildcat)—		
L. T. Burns et al, Wynn 3	*	1887
Clay County—		
Houston Bowers et al, Rice 1	*	1300
C. T. Everts et al, Bullington 4	*	1127
Gilchrist & Boswell, Hamilton 4	*	398
Geo. Golden et al, 1st Texas Jt. Stock Bank 2-C	*	1200
Johnson & Kouri, Taylor 4, blk 39	10	1127
A. P. Kouri et al, Cheeves 1	50	1140
Cheeves 2	*	1149
Kouri & Johnson, Taylor 1, blk 40	132	1131
Stayton Oil Co., McGregor 15	25	1200
Perkins & Cullum, Taylor 13-A	152	1097
Taylor 14-A	96	1075
Sussex Oil Corp., Glasgow 30	73	1071
Hamilton 4	54	1135
Clay County (Ross-Jolly)—		
Royal Pet. Corp., Hatfield 1	*	6025
Cooke County—		
H. E. DeLee et al, Rosson 3	17	1121
Trumter Pet. Corp., Stacey 12-B	23	760
Jack County—		
Gwynn & Overby, Bowden 2	*	3312
Montague County (Benton-Holmes)—		
United Producers Co-Continental, Custers 3-B	*	3587
Rich 3 (pb 3030)	57	3671
Montague County (Wildcat)—		
Benson Bros. et al, Lowery 1	*	6166
Montague County—		
Geo. Golden et al, Maddox 2-A	3	875
Pure Oil, Maddox 11-D	30	860
Throckmorton County—		
Burk Royalty Co., Housley 7	10	704
Housley 8	17	695
Housley 9	35	707
Housley 10	27	692
Owenwood Pool No. 3 Co., Housley 6	*	920
Housley 7	8	698
Housley 8	5	712
Housley 9	39	707
Housley 10	27	738
Housley 11	36	740
Housley 12	56	722
Wichita County (KMA-Ellenberger)—		
Blanco Oil Co.-Al Buchanan, Thom 7-E	2160	4384
Fain-McGaha Oil Corp., Griffin 6-B-E	2400	4410
Shell & Phillips, Griffin 27-E	1936	4400
Tide Water et al, Ferguson 2-E	1016	4230
Wichita County (K-M-A)—		
Consolidated Oil, James 15-E (pb 4009)	425	4629
Wichita County—		
R. W. Barnett et al, Burnett 1, sec 2	23	1390
Hanlon & Buchanan, Inc., Fassett-Tuttle 1-A-G	*	1331
F. W. Merrick, Inc., Dorris 1-B	*	815
R. G. Dr. Co.-C. B. Christie, Willis 2	*	1364
C. W. Snoddy et al, Roller 1	*	1603
Underwood Oil Co., Stine 6	252	1316
Stine 8	50	1319
Wilbarger County (Fargo)—		
Anderson-Prichard Oil Corp., Bond 1	1528	4635
Wilbarger County (Wildcat)—		
FHE Oil Co.-Fleming-Kimbell Corp., Allison 1	*	4725
Wilbarger County—		
J. S. Wood & Son, Addie Womack 1-D	24	1768
Young County (Wildcats)—		
L. T. Burns et al, Ragland 1, (pb 4052)	1288	5029
Jerome McLester et al, Hall 1	*	4379
E. L. Orr et al, Prideaux 1	*	725
Young County—		
W. F. Collins-J. H. Riley, Porter 1	10	636
R. P. Dorian & Mitchell, Daniels 1 (pb 4435) new pay	1026	4945
W. F. Palmer et al, Winkler 4	*	1122
Pemeta Oil Co., Robinson 3-B	10	671
Sams & Prideaux, Prideaux 4-A	†	305
Prideaux 5	3	670
Prideaux 6	10	655
Wrightsman Oil Co., Gilmore 2	*	3048
Henry Zweifel et al, Martin 3	504	2522

OLD WELLS DEEPENED

Company, Well and Location	Init. Prod. Bbls.	Depth
Wilbarger County (Electra Ellenberger)—		
Magnolia, Waggoner-H&TC 64 (otd 1710)	*	3017
Young County—		
A. T. Strong et al, King 1 (otd 3980)	*	4460

West Central Texas

Company, Well and Location	Init. Prod. Bbls.	Depth
Brown County (Wildcat)—		
Frank L. Walker et al, Cox-McInnis 1-A	*	932
Brown County—		
Central Texas Gas Co., Whidden 2	¶2.5	1580
C. L. Wann et al, Willis 7	5	1303
Callahan County (Wildcat)—		
T. S. Stanfield et al, Eubanks 1	*	670
Coleman County—		
Robert McKissick et al, Morris 11	40	3575
Comanche County (Wildcat)—		
Guyle Greynolds et al, Shoults 1	*	625
Hood County (Wildcat)—		
Aztec Oil Co., Gallagher 1	*	3000
Jones County—		
Condor Pet. Co., Holt 3	140	1919
Pet. Producers Co., Akard 5	108	2140
Sandy Ridge Oil Corp., McCreight 3	111	2095
Shackelford County—		
R. H. Roark et al, Elliott 8	9	833
Ungren-Frazier et al, Dyer 5-A	*	956
Stephens County—		
Mitchell-Pierce Oil Corp., Whitson 1	*	3660
Taylor County—		
Dunigan Bros. et al, Hunter 2	47	2359
Tal-Vez Oil Co., Richards 4	51	2379

PETROGRAPHIC AND PHYSICAL CHARACTERISTICS OF SANDS FROM SEVEN GULF COAST PRODUCING HORIZONS

By M. T. Halbouty, B.S., M.S., Merit Oil Corp.

The material printed in this book was first published in The OIL WEEKLY in a number of installments, extending over a seven-week period. Because of the widespread interest and demand for copies, it is being presented in book form for the benefit of those who may wish to study or continue the research work of M. T. Halbouty, the author.

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United States Well Completions—*Continued*

West Texas

Andrews County (Emma)—
Harry Adams & Bradley, University-Skelly 2-A 1102 4290
Cochran County (Slaughter)—
Atlantic Ref. Co., Boyd-Humble 19 .. 1157 5005
Devonian et al, Duggan 4-B-1 ..... 371 5067
Duggan 7-B-1 ..... 384 5064
Duggan 8-B-20 ..... 941 5085
Igoe-Smith 2-A-6 ..... 737 5000
Magnolia, Woodley 8 ..... 929 4976
Woodley 9 ..... 1134 4971
Crockett County (Wildcat)—
E. S. Hitchcock et al, Noelke-Humble 1-A ..... * 1318
Culberson County (Wildcat)—
Cecil Cothrum et al, Casey-Rounsaville 1 ..... * 1295
Ector County (Foster)—
Forest Dev. Corp., Henderson 1 .. 176 4365
J. L. Greene et al, Martin-Humble 2 282 4126
M. A. Grisham et al, Henderson-Humble 2 ..... 617 4357
Ector County (North Cowden)—
Texas Co., Holt 10 ..... 250 4550
Gaines County (Cedar Lake)—
Stanolind, American Warehouse 5 848 4746
Johnson 2 ..... 670 4728
Rayner 6 ..... † 3214
Gaines County (Seminole)—
Amerada, Austin 5 ..... 717 5241
Crain 4 ..... 302 5357
Hockley County (Slaughter)—
Delta Dr. Co., Slaughter-Veal 1 .. 1137 4995
Slaughter 3-C 319 4947
Todd 1 ..... 994 4957
Todd 2 ..... 591 4969
Honolulu Oil Corp., Mallet 7-A, Lab 4 ..... 1505 5076
Slaughter 18-B, Lab 22 ..... 1667 4995
Slaughter 19-B, Lab 52 ..... 882 4990
Magnolia, Graham 2-B 80 5018
Mallet 3-C 1496 5045
Mallet 7-D 1102 4995
Mallet 10-G 1350 5000
Mallet 9-J 1302 5050
Sid Richardson et al, Slaughter 18-B 1399 4980
Skelly Oil, Lincoln 3 ..... 1438 4982
Stanolind, Slaughter 18-A 1159 5030
Texas Co., Mallet 10-E 1173 5030
Slaughter 22 ..... 1595 5030
Slaughter 26 ..... 933 4990
Mitchell County (Northwest)—
F. W. Merrick, Inc., Strain 1 ..... 210 1790
Pecos County (Abell)—
Magnolia, Young-State 1 ..... 1425 5145
Pecos County (Walker)—
Cardinal Oil, White-Baker 2-J 130 2143
Pecos County (Yates)—
M. D. Bryant et al, Hogan-Tidal 1 * 1925
E. M. Thomasson Prod. Co., Perry 1 ..... * 1943
Terry County (Slaughter)—
Honolulu Oil Corp., Frazier 9 .... 1705 4984
Scurry County (Sharon)—
Ordovician Oil Co., Burney 2 ..... 131 2494
Pearson-Sibert Oil Co., Bishop 4 .. 132 2458
Upton County (Gulf-McElroy)—
Gulf, McElroy 250 ..... 687 3135
Upton County (McCamey)—
Miami Oil Co., Bowen-Shell 2 ..... 129 2362
Ward County—
Magnolia, Sealy 10-41 ..... * 2982
Winkler County (Keystone)—
Bashara & Sons, Fee 6 ..... 286 3264
J. R. Sharp et al, Jenkins-Gulf 6 .. 312 3387
Standard of Texas, Baird 25, sec 12 628 3378
Texas Co., Campbell 3 ..... 295 3280
Yoakum County (Waples-Platter)—
Sinclair Prairie, Granger 1 ..... 174 5344
Aloco Oil Co., Knight-Texaco 5 .. 398 5282
Denver P&R Co., Whittenburg 27 .. 1181 5141
Gulf, Elliott 5 ..... 900 5210
Skelly Oil, Comer 4 ..... 518 5220

OLD WELL DEEPENED
Yoakum County (Wasson)—
J. W. Murchison et al, Sawyer 1 (otd 5255 ft) ..... † 6788

Southwest Texas

SAN ANTONIO DISTRICT
Bexar County (Gas Ridge)—
Southwest. Dr. Co., Covel 23 ..... 3 448
Bexar County (Wildcat)—
Stanley & Hall, Brooks 1 ..... * 1403
Frio County (Pearsall)—
W. B. Osborn et al, Davies 2 ..... 500 3925

LAREDO DISTRICT
Duval County (Driscoll)—
Continental, Driscoll 69-A 350 3352
Jim Hogg County (Colorado)—
V. F. Neuhaus, Trevino 4-F 325 2923
McMullen County (Wildcat)—
A. Van Dreasar, Brown 1 ..... * 756
Starr County (Los Olmos)—
Ed Lindberg, Davis 10 ..... 3 465
Starr County (Rincon)—
Continental, Slick 111-B 650 4080
Slick 4-E 350 4115
Starr County (Wildcat)—
Lewis Prod. Co., W. B. Osborn .... * 6007
Webb County (Killam)—
Anderson & Killam, Garcia-Villareal 1 ..... ¶5.0 & 50 2524
O. Killam, Garcia 18 ..... 101 2065

CORPUS CHRISTI DISTRICT
Brooks County (Alta Mesa)—
Standard of Texas, Garcia 7, lse 3 116 2671
Calhoun County (Coloma Creek)—
McSpadden, Clark 2-A 450 8514
Jackson County (Lolita)—
Barnsdall, Lazarus 7 ..... 425 5285
Humble, L. Ranch 17-A 250 5941
Jackson County (West Ranch)—
Magnolia, West 170-A 750 5590
West 178-A 350 6151
Jim Wells County (Ben Bolt)—
H. H. Howell, State Bank 1. ¶20.0 & 50 5234
Jim Wells (E. Premont)—
Transwestern, Dunlap 3, new sand 450 6276
Jim Wells County (Wade City)—
Atlantic, Lagging 2 ..... * 4797
Kleberg County (Stratton)—
Chicago Corp., Wardner 20, outpost ..... ¶100.0 & 200 7200
Nueces County (E. Flour Bluff)—
Humble, Johnson 1 ..... 115 6805
Nueces County (Shield)—
Shield Oil Co., Moore 3-A 500 6611
Nueces County (South Clara Driscoll)—
Texas Conservative Oil Co., Huie 6 71 5460
Nueces County (Stratton)—
S. E. Wilson & Gulf Plains, Union Central 1, nw outpost ... ¶150.0 & 300 . 7192
Refugio County (McFaddin)—
Barnsdall, Marberry 10 ..... 450 5658
Simmons, Rutherford & Gulfshore, Fagan 5 ..... 500 5655
Refugio County (Tomoconnor)—
Quintana, Heard 48 ..... 1500 5925
Victoria County (Coletto Creek)—
Avrill & Cox, Terrell 5 ..... 100 2870
A. Plummer, Terrell 5-A 200 4735
Victoria County (Cologne)—
Houston Oil Co., Martin 2 ..... 500 4837

Wyoming

Big Horn County (Byron)—
Ohio Oil, Hoskins 2-A, se se 15-56n-97w 430 5360
Carbon County (Mahoney)—
Sinclair-Wyoming Oil, Mahoney 5-C, c nw se 34-26n-88w 205 4566
Ohio Oil, Harrison-Cooper 3, sw se 27-20n-78w 50 3717
Fremont County (Muskrat)—
Sinclair-Wyoming Oil, Unit 3-A, cnw ne 3-33n-92w ..... ¶30 5482
Natrona County (Cole Creek)—
General Pet. Corp., Govt. 37-21-G, c nw se sw 21-35n-77w ..... * 4682
Niobrara County (Lance Creek)—
Continental Oil, Dielman 8-A, nw nw 8-35n-65w 790 5325
Ohio Oil, Lamb 19-Account 1, nw ne 5-35n-65w 228 5460
Park County (Oregon Basin)—
Husky Ref. Co., Morris 2, sw ne 29-51n-100w 480 3540
Sublette County (LaBarge)—
Garetson-Knisely Co., Govt. 2, nw se 28-27n-113w ..... * 1453
Texas Co., Govt. 1-L, sw sw sw 27-27n-113w 240 1054
Weston County (Osage)—
E. P. Dilger, Govt. 17-C, cnw sw 30-46n-63w 86 1432
Geo. Keisling, Guyer 2, sw sw se 26-46n-64w 120 1416

OLD WELLS DEEPENED
Lincoln County (LaBarge)—
Investment Oil, Govt. 1, nwc lot 2, 3-26n-113w (otd 875) 15 970
Natrona County (Salt Creek)—
Stanolind, SD3 1, ne ne sw 26-40n-79w (otd 2465) 290 2944
Stanolind, SD 25, se se sw 26-40n-79w (otd 1122) 108 2940

West Virginia

Boone County—
Pure, Federal Coal 88 ..... ¶.07 5176
Braxton County—
Pittsburgh & W. Va. Gas Co., Reed 7806 ..... * ...
Calhoun County—
Hope Natural, Gainer 8538 ..... ¶.38 2160
South Penn, Rothlisberger 2 ..... 15 1771
Hope Natural, Conley 8547 ..... ¶1.55 1285
Clay County—
Virginia, Brown, Swann & Goshorn V-1269 ..... 10 1791
Gilmer County—
Hope Nat. Gas, Blackshere 3583 ¶.08 & 1 3041
McCall Drilling, Fling 1 ..... ¶.07 2080
Hope Nat. Gas, Bennett 8542 .. ¶.013 & 1 2078
Harrison County—
Hope Nat. Gas, Washburn 4099 .. ¶.10 2140
Jackson County—
Columbian Carbon, Hoge 4 ..... ¶2.89 5188
Fisher 1 ..... ¶8.72 5319
Kanawha County—
Peter Silman, Brown 30 ..... 2 2034
Owens, Libby-Owens, Siler Coal Land Co. 11 ..... ¶.25 3682
Lincoln County—
South Penn, Vickers 2 ..... ¶.5 2401
Minger County—
McKinley Trent, Trustee, Stepp 5 .. ¶.24 2408
Ritchie County—
McBurney et al, Satterfield 1 ..... 30 1658
Upsher County—
Cumberland & Allegheny, Smallridge 307 ..... ¶.07 2835
Wayne County—
Chartiers, Damron 1 ..... 6 1978

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WILDCAT REPORT
New Starts and Completions

ARKANSAS
FIRST REPORT

La Fayette County—Wakefield Oil Co.'s Baker 1, se se ne 13-17-20, dr.

CALIFORNIA
FIRST REPORTS

Kern County—Richfield's Kramer 1, sec 34-28-27, lcn, Kern Front area. J. D. Bryan's Gamble 1, sec 6-30-22, lcn, McClung area.

COMPLETIONS

Kern County—Ohio Oil's KCL G-1, sec 36-29-26, td 10,595 ft, Rio Bravo 10,475 ft, Vedder 10,512 ft, both barren, abnd, McClung area. Signal O. & G. Co. and Dwight Vedder's V-S 1, sec 32-27-28, td 2393 ft, upper Vedder 2160 ft, oil stains at top, lower Vedder 2359 ft, oil stains at top, abnd, Mount Poso area. A. E. Dawson's No. 1; sec 3-25-27, td 2653 ft, gray sand 2245 ft, Walker 2380 ft, Pyramid Hills sand 2245 ft, no showings, abnd, Richgrove area.

ILLINOIS
FIRST REPORTS

Bond County—Fox & Conray's Beuckle 1, sw sw nw 11-4n-2w, dr.

Cass County—E. J. Brown's Stibling 1, sw se sw 9-17n 8w, lcn.

Clay County—Rockhill Oil Co.'s Duff 1, c nw sw sw 20-3n-8e, dr. Glenn Scott's Rodgers 1, ne nw nw 36-4n-7e, lcn.

Clinton County—W. R. Walters et al's Monken 1, nw ne ne 3-1n-2w, lcn. G. N. Hawley et al's Walthes 1, nw sw se 6-1s-5w, lcn. Virgil Thompson et al's Deters 1, ne sw ne 11-2n-3w, dr.

Fayette County—Interstate Oil Cruising Co.'s Morgan 1, nw nw nw 36-9n-1w, lcn.

Jefferson County—Prehm Enterprises, Inc.'s Pieszehalski 1, nw sw sw 4-3s-1e, lcn.

La Salle County—A. Hanna's Sage 1, ne se nw 8-32n-2e, dr.

Marion County—Carter's Morgan 1, sw sw nw 5-4n-3e, lcn.

White County—Yingling et al's Shephard 1, ne ne ne 5-4s-10e, lcn. McKee H. Marshall's Bramlet 1, sw nw ne 15-6s-9e, lcn. Tristate Crude Oil Dev. Co.'s Hamilton 1, ne se sw 14-7s-8e, dr.

Wayne County—Smith Pet. Co.'s Martin 1, w½ nw se 28-1n-5e, lcn.

COMPLETIONS

Bond County—Schwarz et al's Studebaker 1, se se sw 21-6n-2w, abnd 3206 ft.

Clinton County—A. W. Guson et al's Billhart 1, se nw se 22-1n-5w, abnd 3217 ft.

Edwards County—National Pet. et al's Crackle Hrs 1, nw nw sw 5-2s-14w, abnd 3150 ft.

Fayette County—Frank Bridge's Fiscus 1, ne ne sw 21-4n-1w, abnd 1544 ft. Sam Jarvis et al's Sinclair 1-D, n½ se nw ne 29-8n-3e, Dev 3022-25 ft, 20 to 40 percent water, td 3080 ft, 337 bbls oil, new horizon Louden pool.

Franklin County—J. A. Burhans et al's Viske 1, e½ ne sw 12-5s-3e, abnd 3292 ft. D. Margrave's Bethel Church 1, nw nw ne sw 1-7s-2e, abnd 2150 ft.

Gallatin County—J. H. Wall et al's Mossman 1, s½ nw sw 7-9s-8e, abnd 565 ft.

Hamilton County—Shell's Ventress 1, sw sw se 12-6s-5e, McClosky 3173-91 ft, td 3191 ft, 1158 bbls oil. Texas' Johnson 1, c w½ se ne 22-6s-6e, abnd 3355 ft.

Jefferson County—Gulf's Reynolds 1, e½ se ne 26-4s-2e, abnd 3057 ft.

Marion County—Texas' Kagy 1, s½ sw ne 7-2n-2e, abnd 2240 ft.

Piatt County—Feltus' Hopkins 1, ne nw ne ne 35-21n-6e, abnd 656 ft.

Richland County—Sinclair-Wyo.'s Legan 1, ne se sw 18-3n-14w, abnd 3394 ft. Texas' Shan 1, e½ se nw 27-3n-9e, abnd 3100 ft.

Saline County—Compton et al's Hudgins 1, ne ne se 22-7s-5e, abnd 3295 ft.

Shelby County—Carter's Leach 1, se sw sw 5-9n-4e, abnd 2055 ft.

Wayne County—Freeman Oil Co.'s Beaird et al 1, c e½ ne sw 22-2n-8e, abnd 3130 ft.

White County—Wall & Mitchell's Kershaw 1-A, sw sw ne 23-3s-10e, Weller 2876 ft, td 2897 ft, new pool, 118 bbls oil. C. D. Neff's Union Cen. Life 1, ne ne sw 10-7s-10e, abnd 2990 ft.

INDIANA
FIRST REPORTS

Posey County—Whisenant & Trenchard's Bundy 1, c sw ne se 17-6s-14w, lcn.

Sullivan County—Paul Dorn's Huff 1, sec 34-8n-10w, lcn.

COMPLETIONS

Daviess County—D. L. Norris et al's Adams 1, ne se sw 35-2n-5w, abnd 505 ft.

Gibson County—R. D. Brown, Inc.'s Bailey 1, nw nw se 10-2s-12w, abnd 2458 ft. Warren & Bradshaw's Reavis 1, sw nw ne 24-2s-10w, abnd 2047⅛ ft.

Knox County—C. L. Wingate's Met. Life Ins. 1, sec 27-1n-11w, abnd 2038 ft.

Posey County—Martin's Keck 1, se se ne 23-8s-15w, abnd 2909 ft.

Randolph County—David Culpepper's Lewis 1, sw sw se 9-19n-13e, abnd 1330 ft.

KANSAS
FIRST REPORTS

Barton County — Lebow & Gussman's Schrepel 1, c e½ ne se 26-20-12w, dr.

Leavenworth County—Sherrod et al's Carr 1, c sw ne 13-10-20e, dr.

Marion County—Rex & Morris et al's Cowman 1-A, c s½ se nw 12-17-4e, dr. R. L. Mendenhall et al's Holon 1, sec sw 28-18-4e, dr.

Pratt County—Central Pet. Co. et al's Ward 1, c e½ se nw 11-26-12w, dr.

Reno County—Hall-Jordan Oil Co.'s Stucky 1-A, c n½ nw sw 31-25-5w, dr.

Rooks County—T. H. Allan et al's Mitchell 1, c n½ ne se 10-10-19w, dr.

Russell County—Central Pet Co. et al's Hilgenberg "B" 1, c s½ se ne 18-15-12w, dr.

COMPLETIONS

Douglas County — Meinholdt & Edwards' Stanley 1, nw ne nw 5-14-21e, 6 mi se Lawrence, Arbuckle 1716 ft, Granite 2463 ft, abnd 2503 ft.

Rice County—Ingling & Parker et al's Markle 1-A, c ne sw 1-20-9w, 3 mi w Lyons, Lansing 2900 ft, abnd 3009 ft.

Rooks County—Cities Service's Ervay 1, sec 2-10-16w, 1 mi e Kruse pool, new disc, Topeka 2801 ft, Lansing 3108 ft, Conglomerate 3428 ft, Arbuckle 3485 ft, td 3495 ft, plug back 3168 ft, perf 45 holes 3136-47½ ft, 12 holes 3109-12 ft, 12 holes 3156-59 ft, 48 holes 3069-80 ft, 3000 gals acid, 115 bbls, 37-gr.

Russell County—Barwick & Davis et al's Shrader 1, c s½ se se 21-12-14w, 6 mi n Russell pool, Topeka 2657 ft, Dodge 2897 ft, Lansing 2933 ft, Sooy 3233 ft, Arbuckle 3261-91 ft, abnd 3291 ft. Central Pet. Co. et al's Harbaugh 1, nwc 21-14-12w, 1½ mi n Greenvale pool, Lansing 2898 ft, Sooy 3210 ft, Arbuckle 3274 ft, abnd 3289 ft. Central Pet. Co. et al's Steinlie 1, c n½ nw ne 29-15-12w, Forest Hill pool disc, Anhydrite 794 ft, Neva 2065 ft, Lansing 3046 ft, Arbuckle 3318 ft, td 3323½ ft, 1099 bbls.

Stafford County—E. W. Hamilton, Central Pet. Co. et al's Ward 1, nec sw 15-23-13w, 3 mi n St. John pool, Viola 3730 ft, Simpson 3766 ft, Arbuckle 3810 ft, abnd 3831½ ft.

KENTUCKY
COMPLETION

Ohio County—Roscoe Evans et al's Smith 1, sec 10-M-34, abnd 254 ft.

NORTH LOUISIANA
FIRST REPORTS

La Salle Parish—J. L. May et al's Louisiana Delta Hdw. 1, c sw nw 20-7n-4e, mat. H. L. Hunt's Goodpine F-18, c sw nw 4-6n-3e, mat; Goodpine F-19, c ne sw 36-9n-4e, mat.

Lincoln Parish—Thomas Richmond et al's Emery 1, nw ne 8-18n-1w, mat.

Red River Parish—Republic Prod. Co.'s Timon 1, irreg sec 39-11n-9w, rig.

Natchitoches Parish—C. Porter Johnson's Lacaze 1, sec irreg sec 63-6n-4w, dr.

Webster Parish—Joe W. Brown's Harris & Willis 1, sw nw 5-18n-10w, lcn, 3000-ft test.

Winn Parish—H. L. Hunt's Goodpine F-2, c nw se 13-9n-3w, dr.

COMPLETIONS

Claiborne Parish—Crow Dr, Co.'s O'Bannon 1, nw nw 30-22n-4w, abnd 5431 ft.

Grant Parish—H. L. Hunt's Goodpine F-1, nw nw 12-8n-2w, abnd 6002 ft.

Natchitoches Parish—Rhodes & O'Mara's Prudential Life 1, ne se 36-11n-10w, abnd 6022 ft.

SOUTH LOUISIANA
FIRST REPORT

Iberia Parish—Gulf's Petit Anse Co. 2, Avery Island dome, se flank, 2 mi sw No. 1, sec 25-13s-5e, bldg rd.

COMPLETIONS

Iberville Parish—Congo Oil Co.'s Dreyfuss 1, Rosedale pros, sec 61-7s-9e, abnd 10,024.

Calcasieu Parish—Pan American's Louisiana Ld. & Livestock 1, Moss Lake pros, sec 8-11-9w, abnd 10,411.

MICHIGAN
FIRST REPORTS

Kent County—Rex O. & G. Co.'s Wood 1, c e½ se nw 33-5n-11w, dr. Homer Fulton's Dawson 1, ne sw ne 21-5n-10w, rig.

Livingston County — Fisher & McCall's Herbst 1, se sw nw 24-3n-5e, rig.

COMPLETIONS

Osceola County—Turner Pet. Corp.'s Gas Unit 1, sw ne ne 7-18n-7w, Stray 1518 ft, td 1528 ft, pb 1527 ft, 1,920,000 ft gas, new field.

Otsego County—Belvidere Oil Co.'s Zembecki 1, c sw 25-31n-3w, Antrim 995 ft, abnd 1167 ft.

NEBRASKA
FIRST REPORTS

Gage County—Bee Dee Oil Co.'s Bankers Life 1, nwc sw 16-3n-5e, dr.

Johnson County—Anderson & Stone's Ellers 1, cwl ne 29-6n-10e, dr.

Sarpy County—Sherrod & Allen et al's

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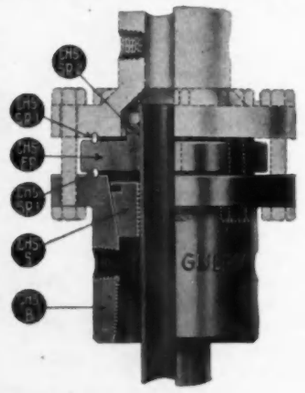

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NEW MEXICO

FIRST REPORT

Eddy County—Sanders Bros. et al's Leonard 1, c nw sw 34-16s-30e, lcn.

COMPLETION

Eddy County—Nick Manetas et al's Lane 1, c se ne 12-21s-28e, elev 3305 ft, lime 2825 ft, abnd in sul w 3020-30 ft.

OKLAHOMA

FIRST REPORTS

Jefferson County—Seitz Cumegys et al's Barrett 1, ne se sw 10-6s-6w, lcn.

Kay County—Ray Ostot et al's Ashbrook 1, nwc sw 7-27n-1w, dr.

Kiowa County—Stauffer Pet. Co. et al's Mayo 1, c ne ne nw 13-6n-18w, dr. Amerada Pet. Corp. et al's Nelson 1, c ne ne ne 1-6n-14w, mim.

Logan County—Harry Miller et al's Katschor 1, c ne sw 7-16n-2w, mirt.

Okfuskee County—C. E. Beal et al's Allen 1-A, ne sw nw 14-13n-9e, lcn.

Payne County—Tomlinson et al's Williams 1, ne se nw 4-19n-2e, dr.

Pontotoc County—Hughes-Thomas et al's Johnson 1-A, swc se 26-4n-5e, dr.

Seminole County—Sooner O. & G. Co.'s Pechacek 1, sw nw sw 12-10n-7e, dr. Barnsdall Oil et al's Baker 1, ne se ne 29-11n-8e, dr.

COMPLETIONS

Choctaw County—C. F. Carter et al's Shull 1, se sw ne 20-6s-18e, 3½ mi e Hugh, abnd 915 ft.

Lincoln County—T. A. Creekmore et al's Tipton 1, nwc sw 23-15n-5e, between Davenport and Skellyville pools, Cleveland 2665 ft, Oswego 3395 ft, Prue 3445 ft, Verdigris 3464 ft, abnd 3505 ft.

McClain County—W. A. Delaney et al's Bandy 1, nw se sw 13-7n-2w, Noble area, Oread 4460 ft, Avant 4575 ft, Belle City 5080 ft, Checkerboard 5565 ft, Woodford 6920 ft, Hunton 6983 ft, Pink Lime 7225 ft, Sylvan 7260 ft, abnd 7322 ft.

Osage County—Ohio-Osage Oil Co.'s Osage 1, c e½ e½ nw 32-22n-9e, 2 mi w East Osage City pool, new pool, Oswego 1880 ft, Bartlesville 2250 ft, pay 1880-90 ft, 4,250,000 ft gas. Herman Madvine et al's Osage 1, nwc sw 14-22n-10e, north extension Wildhorse pool, Big Lime 1368-87 ft, Oswego 1439-60 ft, Bartlesville 1785-98 ft, td 1891 ft, pb 1807 ft, shot 35 qts 1792-1807 ft, 10 bbls, 36 gr.

Pontotoc County—Hughes-Thomas et al's Johnson 1, swc se 26-4n-5e, 1 mi e Ada, Wewoka sd 951-73 ft, Cromwell 1235 ft, Caney 1260-70 ft, abnd 1610 ft.

Pottawatomie County—C. L. Lippert et al's Rosebush 1, ne se sw 34-10n-3e, 2 mi w Tecumseh Lake pool, Viola 5180 ft, Dense 5228 ft, Dolomite 5353 ft, First Wilcox 5393 ft, abnd 5442 ft.

Love County—Joe Baldwin et al's Hill 1, nwc se 26-8s-2e, 8 mi s Marietta, top Strawn 3360 ft, abnd 5511 ft in Strawn.

EAST TEXAS

FIRST REPORTS

Robertson County—R. O. Pinkston et al's Anderson 1, Jos. Webb sur, 6 mi nw Calvert, broken oil sand 1365-71 ft, dst 1372-83 ft, recovered 20 ft oil and 20 ft mud, pb from 1516 to 1400 ft to run pipe.

Wood County—J. C. Moore et al's Greene 1, 1340-ac tr and J. M. Caudle sur, 10 mi nw Hawkins, mim.

COMPLETIONS

Henderson County—A. J. Tyler et al's Dozier 1, ne part 136½-ac tr, Geo. T. Walters sur, elev 386 ft, Austin chalk 2685 ft, Woodbine 3610 ft, abnd 3770 ft.

Madison County—Leon Dunn et al's Jackson 1, Crownover sur, abnd 3643 ft.

WEST TEXAS

Brewster County—Fred Turner, Jr., et al's Turney 1, c n½ nw nw GH&H Ry. sec 39, blk A-2, mach.

El Paso County—J. S. Meriwether, Sr., et al's Bobadilla 1, C NW NW State S. F. 254, 2 mi ne Vinton, mach.

COMPLETIONS

Crockett County—E. S. Hitchcock et al's Noelke-Humble 1-A, SEc n½ Steisser sec 1949, blk 31, anhydrite 517 ft, salt 645 ft, Yates 670 ft, lime 1220 ft, abnd hfw 1317-18 ft.

Culberson County—Cecil Cothrun et al's Casey-Rounsaville 1, c sw PSL sec 7, blk 104, elev 4258 ft, abnd 1295 ft.

SOUTHWEST TEXAS

FIRST REPORTS

Gonzales County—Randon Prod. Co.'s Dunning 1, J. Dillard sur, 8½ mi s Gonzales, ru 6500-ft test to Midway, contract to Martin Thompson.

Jim Hogg County—Sun's Sarita East 1-B, El Randado gr, 25 mi sw Hebbronville, lcn 3850-ft test.

McMullen County—Transwestern Oil Co.'s Ferguson 1, sur 104, 1½ mi sw S. Campana fld, sp 3100-ft test; Gorman Yoakam contractors.

Nueces County—George B. Buescher's Gillette 1, tr 6, 1 mi ne n Luby fld, prep mi 7500-ft test; contract Conroe Dr. Co.

COMPLETIONS

Bexar County—R. C. Stanley & Chas. A. Hall's Brooks 1, Garza gr, 10 mi s SA, abnd 1403 ft.

McMullen County—A. Van Dresar's Brown 6, sur 54, 1½ mi n Crowther, abnd 756 ft.

Nueces County—Sam E. Wilson & Gulf Plains Corp.'s Union Cent 1, sec 2, w Stratton fld, dr 7192 ft, perf 6658-81, 6700-26, 6734-70 and 6804-23 ft, gas and dist, new production west of field.

Starr County—Lewis Prod. Co.'s Osborn 1, sh 1, Los Retachez gr, 50 mi n Mission, abnd 6007 ft.

NORTH TEXAS

FIRST REPORTS

Archer County—Craig & Wilson's Threet 1, SEc n½ blk 92, Jefferson CSL, lcn. Harmon & West's Shawver 1, E. L. Ry. sec 2, A-1171, sp. W. W. McCarty et al's Abercrombie 1, se sw blk 152, Harris subdiv, lcn.

Clay County—Seth Cockrell et al's Henry & Estes 1, NEc sw blk 62, Byers subd, lcn. L. W. Stanford et al's Edrington 1-A, F. W. Grassmeyer sur A-694, lcn.

Cooke County—E. N. Brockman and W. G. Phillips' Cotton 1, Bashnell Garner sur A-396, lcn.

Montague County—Benson Bros. et al's Riley-Ramsey 1, 79-ac tr, C. Ellis sur A-1146, lcn Ordovician test.

Young County—E. L. Orr et al's Webb 1, lot 5, A. Rohus sur, lcn.

COMPLETIONS

Archer County—W. T. Hutcheson, Jr., et al's Wilson-McCrory 1-F, ATNCL sec 101, abnd 1575 ft. Ted Norwood et al's Wright 1, NWc TE&L sec 2435, abnd 1455 ft.

Clay County—L. T. Burns et al's Wynn 3, near c blk 34, H. Williams sur A-704, abnd 1887 ft.

Montague County—Benson Bros. et al's Lowery 1, NEc blk 72, A. Benson sur A-20, Bend 5736 ft, Ellenberger 6036 ft, jkd 6166 ft.

Wilbarger County—FHE Oil Co.-Fleming-Kimbell Corp.'s Allison 1, SWc 90-ac tr, nw part H&TC sec 54, blk 12, abnd 4725 ft.

Young County—L. T. Burns et al's Ragland 1, NEc W½ TE&L sec 257, Bend 3920 ft, Mississippian 4872 ft, td 5029 ft, pb acidized 2000 gals 3987-4052 ft, 161 bbls oil, 64 bbls water 3 hrs. R. P. Dorian & Mitchell's Daniels 1, SWc TE&L sec 421, deeper pay New Castle pool, Bend 4091 ft, Marble Falls 4409 ft, Mississippian 4756 ft, Ellenberger 4920-45 ft, pb and perf 4413-35 ft, 42¾ bbls 1 hour ¾-in. Jerome McLester et al's Hall 1, SEc T. J. Combs sur A-1298, Bend 3770 ft, abnd 4379 ft. E. L. Orr et al's Prideaux 1, NEc 45-ac lse, A. Rohus sur, abnd 725 ft.

WEST CENTRAL TEXAS

FIRST REPORTS

Callahan County—R. H. Roark et al's Harris 1, Jesse Dyson sur 751, lcn.

Coleman County—Merry Bros. & Perini's Greer 1, lot 2, Hiram Kegans sur 520, lcn.

Palo Pinto County—S. A. Jones et al's Rogers 1, sec TE&L sec 894, sp.

Shackelford County—L. L. Rector et al's Grimes 1, swc nw T&P sec 75, blk 12, lcn.

Taylor County—Deep Oil Dev. Co. et al's Higgans 1, nec lot 8, sec 3, D. B. Corley sur, mach.

COMPLETIONS

Brown County—Frank L. Walker et al's Cox & McInnis 1-A, Sam Barrows sur 27, abnd 932 ft.

Callahan County—T. S. Stanfield et al's Eubanks 1, sec nw TE&L sec 3161, abnd 670 ft.

Comanche County—Guyle Greynolds et al's Shoults 1, nwc sec 30, blk 34, Lampasas CSL, abnd 625 ft.

Hood County—Aztec Oil Co.'s Gallagher 1, Robt. Alway sur, abnd 3000 ft.

TEXAS GULF COAST

FIRST REPORTS

Hardin County — Republic & Houston's Hooks Est. 1, 5 mi n Silsbee, Alex Hampton sur, ru.

Harris County—Ralph Johnston's Cockburn 1, Almeda area, 470-ac lse, Jas. Jeffries sur A-492, lcn.

Walker County—Mike Hogg et al's Smith et al 1, Black Creek area, 9 mi nw Huntsville, Hugh Hampton sur A-237, 485-ac lse, lcn for 6000-ft test.

Wharton County—Amerada Pet. Corp.'s Wigginton, Blue Basin area, 10 mi s Pierce, sec 89, ETRR Co. sur A-98, lcn. Wynn Crosby Dr. Co.'s Poole 1, 2 mi w Lissie, 75.17-ac tr, A. J. Fry sur, lcn.

COMPLETIONS

Harris County—McDannald O. Co.'s Penn (Oates Est.) 1, n of Dyersdale, sw part Edwin Stimpson sur, abnd. H. C. Tyrrell's Dixon 1, J. T. Gammon sur, abnd 4119 ft.

Jefferson County—Humble & Shell's Gallier 1, Star Lake area, sw cor T&NO sur 347, 17 mi w Sabine Pass, abnd 8281 ft.

Lee County—J. F. Camp & Son's Harden 1, Albert Nantz lge, abnd 2254 ft.

Montgomery County—H. C. Cockburn's Bender Est. 1, near Tamina, Montgomery Co. School Land sur, abnd 5900 ft.

Orange County—Superior O. Corp's E. Beaumont Townsite Co. 1, 1½ mi n Beaumont, Nancy Davis sur, abnd 7010 ft.

Walker County—Mike Hogg et al's Gibbs Bros. & Wynn Est. 1, Black Creek area, Chas. W. Stewart sur, Wilcox 3359 ft, abnd 7966 ft.

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MEN IN THE INDUSTRY'S NEWS

HOWARD M. HUBBARD, president and general manager of Greenfield Tap & Die Corporation, has been named president of Elliott Company, Jeannette, Pennsylvania. He succeeds Jas. E. Watson, who on July 31 resigned as president and director. After serving with the National Guard on the Mexican border and with the Yankee Division in France during World War I, he attended Massachusetts Institute of Technology and Northeastern University, graduating from the latter school with a B. S. degree in mechanical engineering. He was connected with Bullard Machine Tool Company and Harris - Seybold - Potter Company before joining Greenfield Tap & Die Corporation.

R. B. CURRAN, assistant chief scout for The Carter Oil Company, Tulsa, has been named head of the scouting and statistical division of the company's exploration department. He succeeds Tom Brownfield, who on September 1 will transfer to New York to assist in handling Carter business in the office of the parent company, Standard Oil of New Jersey. Curran will be assisted by Ray D. Sloan, whose current duties as geologist and supervisor of the crude oil reserve section of the division, will be expanded to include supervision of all statistical and analytical work.

Brownfield was employed by Carter in March, 1927, in the crude oil accounting department. In July of that year, he was assigned to assist Ray Collins, then proration umpire, and intermittently for the next three years he was engaged in proration work. At the end of this assignment, he returned to Tulsa to undertake statistical work in the scouting division. He was promoted to head of the scouting and statistical division in 1935. In 1939 and 1940 he was chairman of the Mid-Continent Oil & Gas Association's nomenclature committee.

Curran entered the employ of Carter as a sample washer at Seminole in 1933. Subsequent experience as a subsurface geologist and field scout fitted him for the position of assistant chief scout in charge of field scouting activities, to which he was advanced January 1, 1938. In 1937, he served as president of the Oklahoma chapter of the National Oil Scouts.

Sloan was employed by Carter in 1934 to do surface geology in Colorado, and gained additional surface and subsurface geological experience in Kansas and Illinois. In November, 1939, he was transferred to Carter's Tulsa Office as geologist and supervisor of the oil reserve section of the scouting and statistical division.

J. COOKE WILSON, Beaumont, chairman of the general committee charged with arranging the Spindletop anniversary convention of the Texas Mid-Continent Oil & Gas Association, to be held October 9-11 at Beaumont, last week named personnel of his group. Members are: W. N. Bonner, M. E. Brock, L. P. Garrett, E. C. Kincade, Walter B. Pyron, Joe H. Russell, Harry C. Wiess, H. R. Cullen, Frank Cullinan, George A. Hill, Jr., J. Sayles Leach and Ray L. Dudley, all of Houston; E. DeGolyer, E. R. Brown, D. A. Little, L. S. Sinclair, Walace Hawkins, M. J. McLaughlin, John G. Pew and E. L. Smith, of Dallas; J. D. Collett and Lipscomb Norvell, Fort Worth; Al Buchanan, San Antonio; J. L. Collins, Corsicana; J. C. Hunter, Abilene; A. M. McAfee, Port Arthur; R. L. Vernor, Nederland, and J. E. Broussard, Clarence K. DeBusk, A. C. DeWoody, H. J. Halliday, R. R. Jackson, W. W. Leach, Walter Myers, E. S. Nowery, W. E. Orgain, T. S. Reed, T. F. Rothwell, R. G. Sanders, Waldo Wilson, J. Harry Phelan and Scott Thomas, Beaumont.

PAUL McGIVERN, Tulsa, branch manager for Baker Oil Tools, Inc., has announced his company will be host to members of the Tulsa Purchasing Agents Association and Petroleum Motor Transport Association of Oklahoma at a dinner meeting at the Tulsa Club September 9. This will formally open the fall and winter program of the two associations.

L. D. MANN, general superintendent, manufacturing division, Cities Service Oil Company, is temporarily stationed at Little Rock, Arkansas, directing construction of a $10,000,000 picric acid plant for Cities Service Defense Corporation, a unit formed to build the plant for the War Department. On completion, it will produce 75,000 pounds of picric acid from gas.

D. O. BARRETT, chief engineer for Gulf Oil Corporation, Tulsa, is in a hospital at Claire, Michigan, following an attack of appendicitis. He became ill while inspecting company properties in Michigan.

C. N. BLACK, Louisiana-Arkansas division production superintendent for Magnolia Petroleum Company with headquarters at Shreveport, will retire September 1, and will be succeeded by H. B. Clifton, field superintendent for the division. J. B. Goodrich, production foreman in the Kermit, Texas, district, will relieve Clifton.

N. M. BARNETT has been named manager of a new Detroit branch of Bailey Meter Company, Cleveland, located in the Curtis Building. He is being assisted by R. F. Hanson and R. T. Cowan. The company has enlarged its field engineering staff, assigning L. L. Melick to duty in New York, J. F. Triolo to Philadelphia, G. M. Wallace to San Francisco, B. F. Elias to Cincinnati, and D. E. Smith to Buffalo.

BRUCE E. GOLD, chief engineer of Atlas Supply Company, is transferring his headquarters to the company's main offices at Muskogee, Oklahoma. He joined the Atlas organization at Tulsa in March, 1937, traveling the entire Atlas territory. The transfer is being made to secure better coordination between field stores and headquarters on matters of engineering and machinery service. Before joining the company, Gold spent 12 years with Weber Engine Company, Kansas City, where he was assistant chief engineer from 1930 to 1936. He spent six months with the Caterpillar Tractor Company, Peoria, in the service department, before coming to Tulsa.

O. C. NONWEILER, Shreveport, southern division engineer for The Carter Oil Company, has been transferred to Oklahoma Pipe Line Company as chief engineer at Tulsa. He succeeds E. A. Warterfield, Jr., whose duties as vice president of Plantation Pipe Line Company are currently occupying his entire time.

Nonweiler has been replaced at Shreveport by Myron A. Wright, Seminole, while Carl G. Herrington, Mattoon, Illinois, former eastern division senior petroleum engineer for Carter, has been transferred to Seminole to replace Wright as central division engineer.

R. H. GUMAER has resigned as chemical engineer for Root Petroleum Company at El Dorado, Arkansas, to instruct refining engineering at the University of Tulsa. He graduated from the school in 1937 with a B.S. degree in chemical engineering.

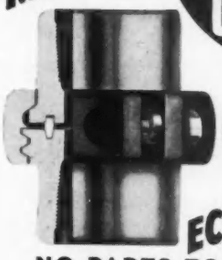
R. V. HOLLINGSWORTH, stratigraphic and palenthological department, Shell Oil Company, Tulsa, has been named assistant professor of geology, University of Tulsa. He graduated from University of Oklahoma in 1931, and did graduate work at the University of Chicago.

ERNEST C. ARNOLD, named supervisor of oil and gas operations for the Osage Nation beginning September 1, is now acting supervisor of oil and gas operations for United States Geological Survey at Roswell, New Mexico.

A. F. RICHARD, president and manager of The Big Indian Oil & Development Company, Kansas City, Kansas, is currently in North Texas, making his headquarters at the Turner Hotel, Gainesville.

FRANK MONAHAN, sales engineer for Frick-Reid Supply Corporation in northern Oklahoma and southern Kansas, was injured in an automobile accident, and is now recuperating at a Wichita hospital.

SAVE TIME AND MONEY
with Red-Rex QUICK-JOINT PIPE UNIONS



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AND CAUSE DELAY

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WICO IGNITION

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Pipe Line Equipment
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Clarence L. Boyd Co., Inc.
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Oklahoma City, 17-19 West Pott
Guthrie, 501 W. Oklahoma

BLANCHARD SMITH, formerly with Reynolds Gas Regulator Company, has been named Mid-Continent representative for The Chaplin - Fulton Manufacturing Company, Pittsburgh. Earlier, he was connected with Westcott & Greis, Inc., Tulsa. Making his headquarters in Kansas City, he will cover a territory bounded by Iowa and Nebraska on the north and Texas and Louisiana on the South.

M. M. KORNFELD, Houston consulting geologist, has opened a branch office at 506 Guaranty Bank Building, Alexandria, Louisiana, with James Muslow, graduate of the University of Texas, in charge. Kornfeld's Houston office has been moved from the West Building to 1818 Second National Bank Building.

P. H. BOHART, Gulf Oil Corporation, Tulsa, has been named chairman of an oil-industry committee to meet with H. LeRoy Whitney, of the Alloy Steel Division, Iron & Steel Section, Office of Production Management, to estimate steel and alloys required for sucker rods for the period ending December 31, 1942. Members of the group are M. T. Archer, The National Supply Company, Toledo; F. B. Bayless, Oil Well Supply Company, Oil City, Pennsylvania; H. N. Marsh, General Petroleum Corporation of California, Los Angeles; Mercer H. Parks, Humble Oil & Refining Company, Houston, and R. M. Pease, Axelson Manufacturing Company, St. Louis.

HARLEY L. PARKS, 37, production superintendent for Sun Oil Company in the Odessa, Texas, district, drowned August 17 in Red Bluff Dam Lake, on the Pecos River. He was superintendent of East Texas district operations before receiving the West Texas assignment last April, and had been with the company 15 years.

C. R. WEIDNER, 58, chief engineer for Sinclair Refining Company's pipe line department, died August 20 of a stroke while at his hotel room in Independence, Kansas. He was a veteran in Mid-Continent pipe line circles, having served as chief engineer for Prairie Pipe Line Company before its merger. Prior to this connection, he was a professor at the University of Wisconsin.

E. R. O'BRIEN, 67, former Mid-Continent production superintendent for Phillips Petroleum Company, died at his home in Mt. Pleasant, Michigan, August 18 following a heart attack. He was with Phillips for 18 years before retiring.

J. W. THOMPSON, 39, driller for John N. Anderson Well Servicing Corporation, Oklahoma City, was fatally burned at a Guthrie oil well fire on August 17.

W. L. CUPIT, district chief clerk for Humble Oil & Refining Company, has been named assistant chief clerk of the North Texas division. J. E. Barwick, district superintendent, has been transferred from North Crowley to the Magnet district.

EDWARD
6000-Lb. O.W.G.
VALVES

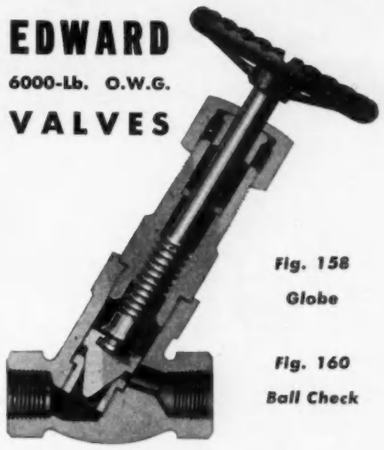

Fig. 158
Globe

Fig. 160
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HIGH PRESSURE
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2. Full-Port Lubricant Sealing Grooves.
3. Wedge-Proof cylindrical Super-Surfaced Core.
4. Sealing Grooves on Plug never pass Ports.

1. **AUTOMATIC LUBRICATION**—Provides a constant lubricant seal • Line pressure automatically forces lubricant from reservoirs to sealing grooves • Eliminates necessity of frequent operation of lubricant screw • Ample downstream (sealing end) lubrication • Reduces friction—valve turns easily • Reduces wear and extends life of valve

2. **FULL-PORT SEALING GROOVES**—Sealing grooves encircle ports — assures complete uniform seal • Provides a dependable seal against high pressures, liquid or gas • Full-Port Lubrication thoroughly lubricates core — valve operates easily • Reduces washouts • Reduces wear and extends life of valve

3. **WEDGE-PROOF SUPER-SURFACED CORE**—Cylindrical Core positively cannot wedge—permits easy turning • Perfect fit of core to body conserves lubricant and maintains leakproof seal longer • Lubricant lasts longer . . . saves time . . . saves valves • Super-Surfaced core provides extra resistance to abrasives and corrosion agents • Reduces wear — lasts longer

4. **SEALING GROOVES ON CORE**—Never exposed to fluid • Prevent loss of lubricant into fluid line . . . insures constant seal • Protects sealing grooves on core from direct cutting action of fluid • Lessens intrusion of abrasives into lubricant sealing grooves . . . reduces wear on vital sealing surfaces • Prolongs life of valve

*When lubricating a Mission Plug Valve, a portion of the lubricant is forced into reservoirs. Thereafter, the line pressure AUTOMATICALLY feeds this stored lubricant, as needed, into the downstream seal grooves. So long as lubricant remains in the reservoir a perfect seal is assured.

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Squeaks from the Bull Wheel

Sound Effects

"She's the image of her mother."
"Yes, a talking picture."

Proof?

This coin is no good. It's spurious.
Ridiculous! Why, it's dated 1921. It would have been noticed before this if it had been bad.

Indication

What makes you think he's an efficiency expert?
Well, he always waits to make up a foursome before passing through a revolving door.

Flattery—In Reverse

Hubbie—It's queer, but the biggest idiots seem to marry the prettiest women.
Wifie—Now, you're trying to flatter me!

In Any Case

The Hollywood magnate told an assistant that in his opinion a certain writer was the only man for a film they had under consideration. The assistant was tactfully doubtful.
"Don't you think he's a little too caustic?"
"Do I care how much he costs? Get him!"

A Tough One

British Maiden—He wears my photo over his heart and it stopped a bullet while he fought in Crete.
2nd British Maiden—I'm not surprised, dearie. It would stop anything.

Here's One

A couple of girls handed the cashier of a cafeteria on their way out a slip of paper with the number 1004180 on it. This satisfied the cashier, who let them pass without paying. Why?
Well, it reads: "I owe nothing for I ate nothing."

Not There

A woman riding a trolley car was anxious not to pass her destination. She poked the conductor with her umbrella. "Is that the First National Bank?"
"No, mum," replied the conductor, "That's my stomach."

Offer Accepted

To the very end Artemus Ward never forgot that he was a humorist. His doctor offered him some medicine to relieve him in his final moments, but he refused to take it.
"Do take it," begged the playwright, Tom Robertson, "for my sake. There is nothing I would not do for yours."
"Do you mean that?"
"Absolutely!"
"Then you take it."

Practical Scott

An enterprising pastor, called to a parish in a small mining town, added many members, and finally built a new church. A steam-heating plant was installed, and he felt the building was complete except for a church bell. The members had contributed so generously that the pastor decided to go outside the fold for donations.
His first call was on a hard-handed Scot, to whom he explained his desire. The Scot asked, "Ye say ye have a noo kirk?"
"Yes."
"An' noo ye want a bell for 't?"
"That's right."
"An' ye say the kirk is heated by steam?"
"Yes."
"Weel, Dominie, whyfore d'ye want a bell? Why don't ye put a whistle on it?"

Reflection

And this, I suppose, is one of those hideous caricatures you call modern art.
No, that's a mirror.

"Well-Trained"

You're rather a young man to be left in charge of a drug store. Have you a diploma?
"Why—er—no, sir; but we have a preparation of our own that's just as good.

Precaution

"I'm stepping out in society. Tonight I'm having dinner with the upper set."
"The steak may be tough — better take the lower set, too."

Oil Company

STOCK FORMS

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The GULF PUBLISHING COMPANY operates a department for the design and production of accounting and field reporting forms for oil company use, and carries in stock for immediate delivery over 100 forms for the—

Accounting, Production, Payroll, Material, Geological and Traffic Departments.

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When a pre-packed gravel screen is needed, Layne Hydro-Pak is the best installation you can make. The fine gravel is placed, by hydraulic pressure, between seamless steel slotted pipe.

This inner and outer casing of steel prevents any disturbance of the gravel while going in and after setting. The two sections of screen are securely joined and cannot shift.

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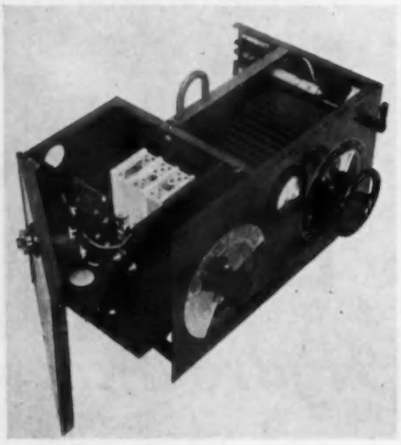
NOTES FOR THE Equipment Buyer and User

Welder Control Box

THE LINCOLN ELECTRIC COMPANY

A welder control box for dual continuous control for arc welding machines has been announced by The Lincoln Electric Company, Cleveland.

Designated Type G, the box is designed to prevent accidental contact



Lincoln Electric Control Box

with live parts, increase accessibility, permit wiring with flexible or rigid conduit, or rubber-covered multiple-conductor cable, and to eliminate dangers from unintentional loosening of the lifting hook.

It provides a separate compartment for all AC circuits, including push button, and another separate one for DC terminals. Both compartments have a snap catch which holds the door in closed position, with the AC compartment also provided with screws for locking to prevent an unauthorized person from opening the compartment and touching live parts. The snap catch on the door of the DC compartment makes terminals readily accessible without use of tools, and provides a complete cover for terminals when the door is closed.

Control box is permanently grounded to the motor and generator frames through mounting bolts to take care of special inspection rules that require that both control box and frame be grounded. A new lead clamp prevents bending or damage to output studs when welder leads are accidentally jerked or pulled.

Thermocouple Data Book

Wheelco Instruments Company, Harrison and Peoria Sts., Chicago, has published a enw Thermocouple Data Book and Catalog. Its 32 pages contain such valuable information as temperature conversion tables, millivolt tables, pipe and wire sizes, decimal equivalents, wire resistances, recommendations for checking thermocouples and pyrometers, information on how to construct thermocouples, etc.

Well Servicing Unit

UNIT RIG & EQUIPMENT COMPANY

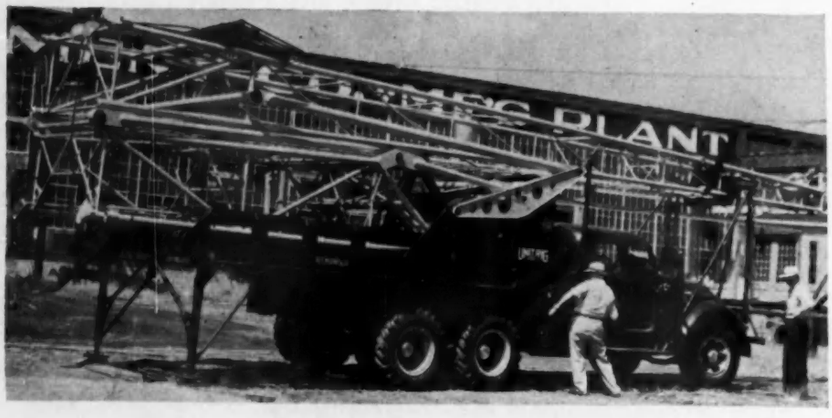
Unit Rig & Equipment Company, Tulsa, announces a new well servicing unit, Model U-24, which is fully equipped with Air-O-Matic clutches and mounted upon an International Truck with a Lee C. Moore automatic mast, and featuring an automatic speed control clutch and mast raising and lowering clutch combined.

This automatic speed control device is conveniently located for the servicing operator.

A special ratchet lever on the brake arm extension allows the operator to leave the servicing unit without danger of any mechanical movement.

No ground guy wire attachments are made to the 60-foot mast, utilizing only 3 jacks and 3 tie-downs. Auxiliary equipment includes an explosion proof exhaust which by centrifugal force moves the incandescent hot carbon outward rather than upward with the exhaust gases. Other features are a water-cooled manifold, torque convertor to prevent engine stalling, friction clutch drive with speed ratio of 12:1, an 85 horsepower Buda engine.

This unit is designed to operate up to a 20,000 pound stalled line pull and is especially adaptable for pulling ⅞-inch sucker rods and 3-inch tubing to 3500 feet. With slower speeds, greater depths are possible.



Unit Rig & Equipment Company Well Servicing Unit

Circuit Interrupter

WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY

A non-automatic circuit interrupter for disconnecting or interrupting AC and DC circuits in Class 1, Group D locations where atmospheres contain gasoline, natural gas and other explosive vapors, has been announced by Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pennsylvania.

Westinghouse Circuit Interrupter

Manually operated, it is furnished with a NEMA Type 7 cast enclosure finished in aluminum with a closely ground fit between box and cover. Units are rated from 50 to 600 amperes, depending on frame size, and interrupting capacity is 5,000 to 10,000 amperes. They are designed for 250 to 600 volts on AC circuits, and 125 to 250 volts on DC circuits.

De-ion arc quenchers that divide and extinguish arcs are designed to reduce contact burning to a minimum. Silver or special silver composition with non-welding characteristics is used for all main contacts.

Pumps

Worthington Pump & Machinery Corporation, Harrison, New Jersey, has issued Bulletin W-483-B1, describing rotary pumps with double-helical gears. It describes seven types for various applications, and gives features and suggested applications for each type. Tables give speeds, capacities, pressures and power requirements.

Vent Valves

The Johnston & Jennings Company, Oceco Division, Cleveland, has issued Catalog V-50 covering its line of vent valves and flame arrestors. It gives complete specifications of individual items, and explains and illustrates applications. Illustrations include line drawings and field installations.

Meeting to Discuss Priorities To Be Held August 26

A meeting between oil-equipment manufacturers and supply concerns with R. E. Allen, who will handle priorities under Petroleum Coordinator Harold L. Ickes, will be held at 10 a.m. August 26 at the Blackstone Hotel, Fort Worth. The purpose of the meeting, to which all manufacturers are invited, is to discuss the industry's steel situation. As the week closed, equipment people did not know whether Allen was to listen or do the talking.

Geochemical Service Corporation Announces Management Change

Geochemical Service Corporation, Tulsa, has announced a change in management, but will continue to operate under the same name with John W. Merritt retained as president. The company will be licensed under E. E. Rosaire and Standard Oil Development Company patents.

R. E. Bush, sales representative, and Mike DiCesaro, chief chemist, both formerly with Subterrex, Houston, have joined the company at Tulsa. Headquarters have been moved from 321 South Detroit Street to 311 East 4 Street.

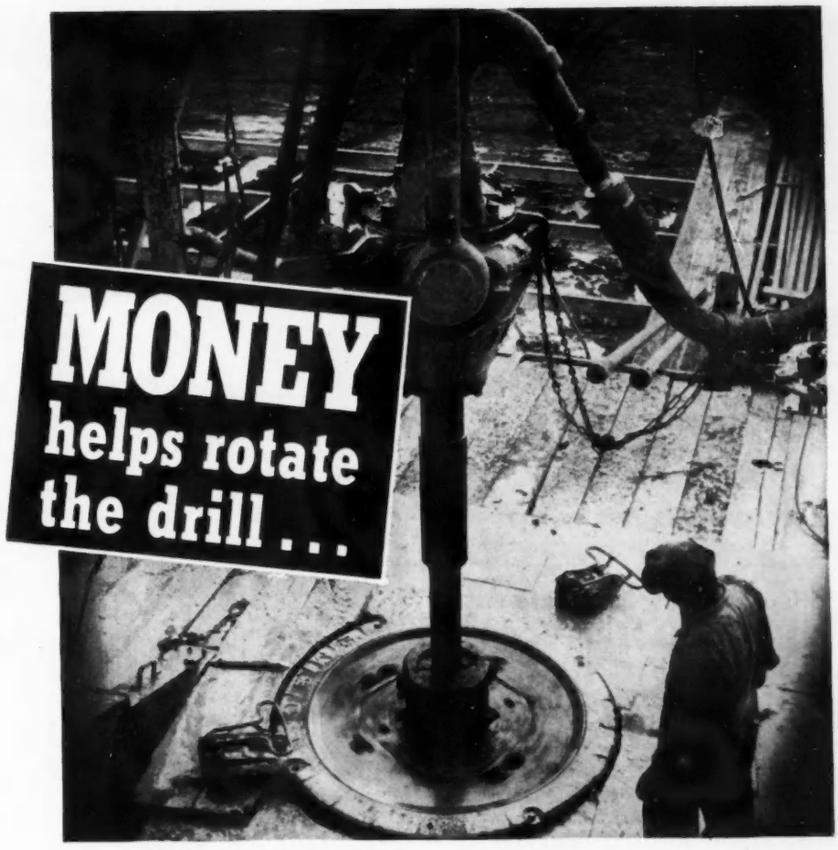
"Done in Oil," by Leven, Presents Oil Encyclopedia

An extensive encyclopedia of the oil industry is provided by "Done in Oil," by David D. Leven. It reviews the industry and its work from practical, economic and financial standpoints, and in vibrant non-technical narrative style.

Its 1084 pages contain 26 photographs, 22 maps, 29 graphs, 7 charts, 108 tables covering production, drilling costs, supply, demand and consumption, imports and exports, 5 pages of bibliography, a glossary and 5 appendices.

Chapter headings include petroleum economics, capital investments and expenditures, supply and demand, major oil-field operations by states, maintaining oil reserves, oil conservation and proration, international oil situation, Mexico's oil expropriations, importance of oil in war, petroleum industrial organization, petroleum sciences, petroleum prospecting, drilling operations, casing the well, bringing in the well, protecting the well, producing the oil, secondary methods of production, costs and valuations, petroleum storage, transportation, refining, natural gas, natural gasoline, crude oil marketing, marketing refined products, capital investments, investments and appraisals, oil company reports, valuation of wasting assets and problems of depletion, corporation finances involved in the petroleum industry, principles of investments and the working of the security markets, diversified royalty investments, oil royalty business, purchase and sale of royalties, principles of royalty ownership, royalty information and procedures, oil leases, appraising and valuing royalties, investment and royalty trusts, the oil situation vs. royalty investments, conservation vs. royalties, investments regulated, regulation of oil royalties, taxing the petroleum industry.

Copies of "Done in Oil" may be obtained from The Ranger Press, 347 Fifth Avenue, New York, at $10 a copy.



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"Men within the industry should study—not read—it through. An exceptional piece of work . . ."

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"A successful effort to interpret the problems and spirit of the American petroleum industry . . . calm, straightforward, and reasonable."

THE OIL WEEKLY says—
"Having neither bones to pick nor irons in the fire, Shuman has reduced the industry to common-sense economic essentials."

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Compressors

Pennsylvania Pump & Compressor Company, Easton, Pennsylvania, has issued Bulletin 194 covering horizontal single-stage heavy-duty compressors. The units are available in sizes from 5- to 125-horsepower, and for pressures up to 150 pounds.

LETTERS

Open-Hole Record

DEAR SIR:

In the interests of accuracy, a couple of corrections may interest you regarding your article on page 23 of the August 4 issue.

Under the title, "Breaks Two Drilling Records," you mention an "unparalleled record" of 11,521 feet of open or uncased hole, 3101 to 14,622 feet.

Continental Oil Company wells Nos. K.C.L. D-2 and Community 1 have each surpassed this amount; D-2 having 13,054 feet of open hole, 997 to 14,051 feet, and Community 1 having 12,028 feet of open hole, 1000 to 13,028 feet.

R. W. FRENCH.
Continental Oil Company,
Los Angeles.

Not Abandoned

DEAR SIR:

This is to advise you that you have made an unauthorized and an untrue statement in THE OIL WEEKLY, Vol. 102, No. 11, page 65, under McMullen County, in which you state, "W. M. Stephenson's Jacob 4, Fadden Sur. 4 miles N.W. Calliham, abandoned at 502 ft."

This is not true, as we have never made any statement as to the depth of our well, which is far greater than the depth indicated by you. We have no intention of abandoning this well as had been reported, and respectfully request that you make a correction, and state that the information given to you was false and not authorized by any person authorized to do so.

Kindly make this clear as it is very important to us, that is myself and my company, as we expect to continue drilling this well until we find oil or gas; or until there is no further hope of obtaining either oil or gas in this well.

W. M. STEPHENSON,
Manager
Grubstake Investment Ass'n, Inc.
San Antonio.

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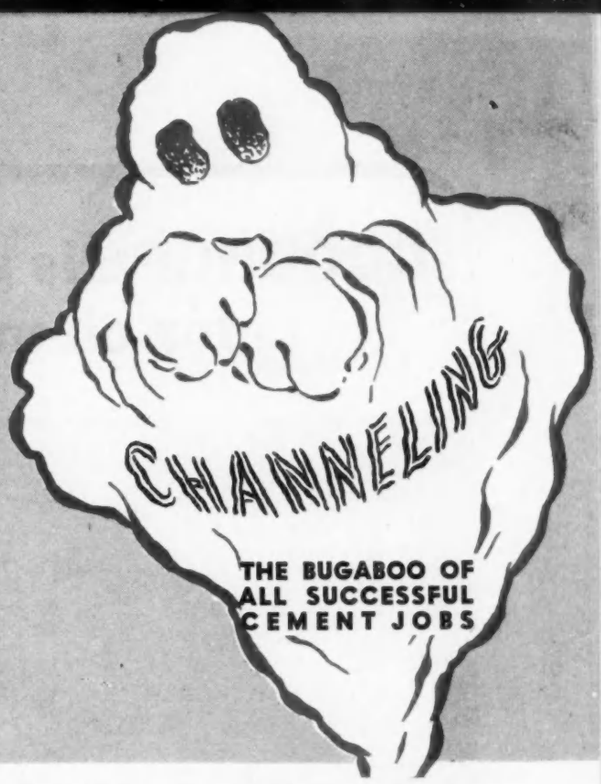
. . . By Using BAKER WASH-DOWN WHIRLER EQUIPMENT



As experienced operators well know, one of the biggest bugaboos in cementing casing is the hazard of channeling . . . a factor which may necessitate a costly recement job. Experienced operators also know that Baker Cement Wash-Down Whirler Equipment reduces this costly hazard to a minimum by providing uniform distribution of cement at the critical point . . . the shoe and the shoe joint. (See illustration and accompanying details for reasons why.)

The efficiency of Baker Cement Wash-Down Whirler Equipment, which was introduced and developed by Baker engineers, has been demonstrated in thousands of successful cement jobs, and it is generally acknowledged today as being the most efficient type of cementing unit available.

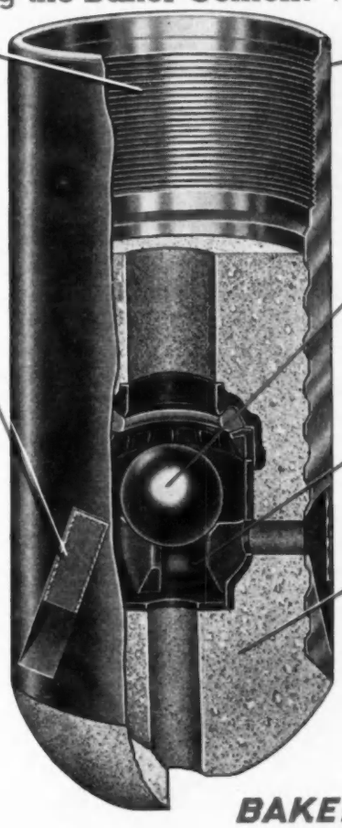
The Baker Whirler principle is available in two types of shoes . . . a Baker Cement Wash-Down Whirler Float Shoe and a Baker Cement Wash-Down Whirler Guide Shoe.

For detailed information, refer to Page 222 of the 1941 Composite Catalog, or get in touch with the nearest Baker office or field representative.

Here Are the Facts Concerning the Baker Cement Wash-Down Whirler Float Shoe:

1 THREADED CONNECTION FURNISHED TO FIT ANY TYPE OF CASING. Baker Floating Units can be furnished with threaded connection to fit the specifications of your casing. (Float collars can be furnished with both "female" and "male and female" threaded connections.) Manufacturing precision assures thread uniformity and accuracy.

5 BAFFLED WHIRLER PORTS. These whirler ports provide the important wash-down whirler action so advantageous in circulating and cementing operations. When the fluid strikes these baffled ports, a downward and then an upward whirling motion results. In running in, this whirling action provides a means of effectively washing away bridges. During cementing, the whirling action, imparted first to the fluid preceding the slurry and then to the slurry itself, properly prepares the hole to receive the cement. It then assures best possible distribution of a uniform body of cement around the shoe and the shoe joint, reducing the hazard of channeling to a minimum. Here is the ultimate in cementing efficiency.



2 AMPLE STRENGTH. The seamless steel casing shoe into which the concrete plug and Plastic BALL-TYPE Valve Assembly are securely anchored provides a unit that has the STRENGTH to float the longest and heaviest string of casing with an ample factor of SAFETY.

3 POSITIVE, LEAK-PROOF BACK-PRESSURE VALVE. The buoyant Plastic BALL-TYPE Back-Pressure Valve floats in the cement slurry or rotary mud and instantly forms a leak-proof double seal against a narrow, tough rubber ring (backed by Plastic and concrete) at the slightest reversal of pressure. Here is valve efficiency at its best.

4 AMPLE CIRCULATION AREAS. The correctly designed, streamlined Valve Assembly provides passageways ample for any circulating or cementing operation . . . a fact attested to by actual field performance under the most severe operating conditions.

6 DRILLABILITY. Complete and easy drillability results from the internal construction of Baker-Formula Concrete and Plastic . . . the Plastic BALL-TYPE Valve Assembly being set on end in the concrete plug to present a minimum cross-sectional area to the drilling bit. The concrete and the Plastic are quickly and easily drilled up and circulated out of the hole.

BAKER CEMENT GUIDING, FLOATING, CEMENTING EQUIPMENT

BAKER OIL TOOLS, INC.

MAIN OFFICE AND FACTORY:
6000 South Boyle Avenue — P. O. Box 127, Vernon Station, Los Angeles, Calif.
CENTRAL DIVISION OFFICE AND FACTORY:
6023 Navigation Boulevard — P. O. Box 3048, Houston, Texas
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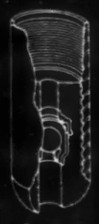
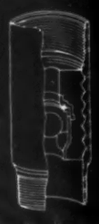
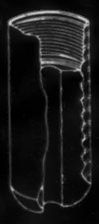

Product No. 100

Baker Cement Float Shoe
Baker Cement Float Collar


Product No. 101 M&F

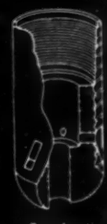
Baker Cement Guide Casing Shoe


Product No. 102

Baker Cement Wash-Down Whirler Float Shoe

Product No. 120

Baker Cement Wash-Down Whirler Guide Shoe


Product No. 121

Baker Cement Whirler Float Collar with Solid Bottom Baffle with Metal "Petal" Basket

Product No. 306.

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A DIVISION OF GENERAL AMERICAN TRANSPORTATION CORPORATION

Looking Ahead
WITH THE EDITOR

Multiple-Engine Diesel-Electric Rig Provides Flexible Operation

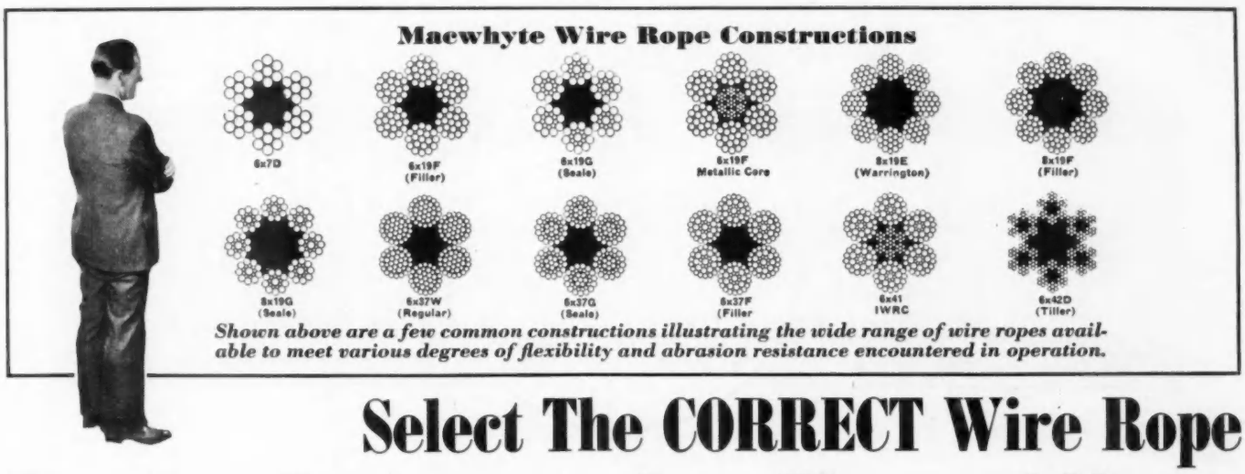
A diesel-electric rig that receives power from 12 semi-diesel engines operating the same number of generators provides a very flexible drilling hook-up. A variable voltage transmission allows fingertip control of power distribution between slush pumps, draw works, and rotary motors, while electric output of the generators may be compounded to direct full power to motors where load requirements are greatest.

Twelve 60-kilowatt, 100-volt direct current generators have a combined capacity of 720 kilowatts, and are motivated by six-cylinder, 150-horsepower engines operating at 1200 rpm, connected by direct drive, and served by 125-volt, 40-ampere excitors. Current is directed to a control house containing a panel with meters and numerous switches to allow easy manipulation by motor man. Additional switches are provided on the derrick floor to give the driller control of all power in case of emergency.

Current is transmitted to five motors, including two large units for the draw works, two for the pumps, and one for the rotary, and is distributed to give greater power to motors where work is concentrated. Thus little loss of power is involved, and at the same time stalling engines by overloading is almost an impossibility.

This interesting rig, now drilling deep tests in the Barataria field on the Mississippi River Delta, will be described in detail in a fully illustrated article to appear in an early issue of THE OIL WEEKLY.

THE OIL WEEKLY. Published every Monday. Entered as second class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879.



Shown above are a few common constructions illustrating the wide range of wire ropes available to meet various degrees of flexibility and abrasion resistance encountered in operation.

Select The CORRECT Wire Rope For Your Equipment—Save Time and Money

(No. 8 in a series of informative articles for wire rope users prepared by the Macwhyte Wire Rope Company. Previous articles in this series are available on request on your company letterhead.)

Your wire ropes are subjected to . . .

1 **Bending fatigue.**
2 **Abrasive wear.**
3 **Loading stress.**

A Wire Rope is designed either to give most satisfactory service under any one of the above conditions . . . or any combination of them.

You must determine (or let Macwhyte engineers determine for you) the major factors affecting your ropes; then install the rope that will meet these factors to the best advantage.

Remember, wire ropes must have:

Flexibility to meet ***bending fatigue.***
Abrasion resistance to meet ***abrasive wear.***
Strength to meet ***loading stresses.***

How to Determine Flexibility

Flexibility of a wire rope is determined by the number and size of its wires. Generally speaking, a rope with a small number of large wires is (See Fig. A) much less flexible than a rope with a greater number of smaller wires (See Fig. B).

Fig. A: 6 x 7
Hard Laid

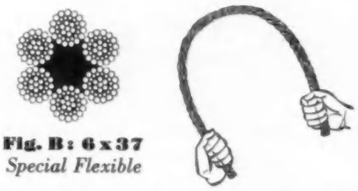


Fig. B: 6 x 37
Special Flexible

Between these two extremes are numerous wire rope constructions that vary the degree of flexibility. The flexibility needed is determined by the smallest diameter sheave or drum on the equipment. Wire rope catalogs contain information regarding proper sheave diameters for various constructions of rope but it must be remembered that often flexibility must be sacrificed for abrasion resistance and a compromise is often necessary.

One of the reasons why Monarch Whyte Strand PREformed wire rope has become so popular is because the preforming of the rope increases its flexibility which is especially valuable where a compromise is necessary to get the best service.

How Abrasion Resistance Is Determined

The *abrasion resistance* of a wire rope is determined principally by the number and size of the *outside wires* in each strand in the wire rope. The wire rope, Figure A, for example, has high abrasion resistance. Notice that this rope has fewer but larger outside wires than rope Figure B. However, even though there might be an extreme abrasion condition of service that would normally require a rope having the best abrasion resisting characteristics, yet a compromise must often be made where sheaves are relatively small.

How Strength Is Determined

The strength of wire rope required for a specific piece of equipment depends a great deal upon the necessary safety factor of operation required.

A wire rope is never used up to its maximum strength. Many factors such as bending, and friction through sheaves and around drums, and also in some cases the weight of the rope itself adds considerably to the actual load that the rope is caused to sustain.

Therefore, each type of operation usually has a specific safety factor which must be considered before it can be determined whether or not a specific rope is strong enough for the job. (Copies of previous articles in this series discussing safety factors are available on request.)

What to Do

There have been many installations where the proper application of wire rope has doubled the service with a consequent double saving in wire rope dollars. Keep service records on the basis of tons of material handled, car miles traveled, ton miles, etc., rather than hours and days of service to see how the specific wire rope you are using likes its work.

Consult with Macwhyte Company or any one of its many distributors on any question pertaining to wire rope, its application, and the service you are getting.

There are hundreds of installations like yours on which Macwhyte wire rope engineers have had experience. They can save you the trial and error method of determining the best rope for your use.

The new Macwhyte general wire rope catalog G-14 contains over 60 pages of helpful information that will save you money. Write for a copy on your company letterhead.

NO. 574

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NINTH ANNIVERSARY OF INHIBITED ACIDIZING

The present highly developed Chemical Service for oil and gas wells had its inception nine years ago when the INHIBITED Acidizing technique was announced by The Dow Chemical Company, parent company of Dowell Incorporated. Because this method protected metal well equipment from corrosion, yet permitted the acid to accomplish the desired results in the formation, INHIBITED Acidizing was widely acclaimed and accepted by the industry. The service did not stop there. Dowell was to play a much larger part in the exciting drama of oil production.

The widespread acceptance of the INHIBITED Acidizing technique has made it possible for Dowell to expand its facilities until chemical research and engineering now serve the entire field of oil and gas production. So important has this service become that INHIBITED Acidizing is considered an essential and integral part of production procedure.

That the benefits resulting from the development of INHIBITED Acidizing have not been one sided, that producers have shared in its advantages, is witnessed by a lengthy and interesting parade of accomplishments. Dowell has treated tens of thousands of wells; recovery has been stepped up; millions of dollars in extra profits have been the producers' reward. More, Dowell service can now be applied to an ever-widening variety of problems facing producers.

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